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FILE COVERS 1907 - 13 Dec 2010 VOL 153 ISS 25
 FILE LAST UPDATED: 12 Dec 2010 (20101212/ED)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the fourth quarter of 2010.

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=> d que l19

L5	10	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	MYCOPLASMA CYNOS+PFT,N T/CT OR (M OR M. OR MYCOPLAS?) (2A)CYNOS
L6	3	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L5 AND (INACTIV? OR ATTENUAT? OR ?VACCIN?)
L7	10	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L5 OR L6
L8	372	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	STREPTOCOCCUS EQUI ZOOEPIDEMICUS+PFT,NT/CT
L9	468	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L8 OR STREP? (3A)ZOOEPI D?
L10	863	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	CHLAMYDOPHILA+PFT,NT/C T
L11	6964	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	CHLAMYDIA+PFT,NT/CT
L12	19864	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L10 OR L11 OR CHLAMVD?
L13	3	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	(L7 OR CYNOS) AND (L12 OR L9)
L14	924	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L12 AND ?VACCIN? AND ?IMMUN?
L15	126	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L14 AND (INACTIV? OR ATTENUAT?)
L18	1	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L15 AND (L7 OR ?CYNOS?)
L19	4	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L13 OR L18 OR L6

=> fil medline embase biosis

FILE 'MEDLINE' ENTERED AT 17:53:23 ON 13 DEC 2010

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FILE 'BIOSIS' ENTERED AT 17:53:23 ON 13 DEC 2010

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=> d que 149

L49 65 SEA ?CHLAMYD?(2A) (PECORUM OR SUIS OR TRACHOMATIS OR PNEUMONIA?)
(S) (ATTENUA? OR INACTIV?) AND ?IMMUN?(S) RESPON?

=> dup rem 119 149

FILE 'HCAPLUS' ENTERED AT 17:53:29 ON 13 DEC 2010
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PROCESSING COMPLETED FOR L19
PROCESSING COMPLETED FOR L49
L59 41 DUP REM L19 L49 (28 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE HCAPLUS
ANSWERS '5-17' FROM FILE MEDLINE
ANSWER '18' FROM FILE BIOSIS
ANSWERS '19-41' FROM FILE WPIX

=> d 159 ibib hit tot

L59 ANSWER 1 OF 41 HCAPLUS COPYRIGHT 2010 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2005:29227 HCAPLUS Full-text
DOCUMENT NUMBER: 142:133045
TITLE: Vaccines comprising attenuated viruses and
bacteria or antigen-encoding nucleic acids and
antibodies for treating canine infectious respiratory
disease
INVENTOR(S): Brownlie, John; Chalker, Victoria Jane; Erles, Kerstin
PATENT ASSIGNEE(S): The Royal Veterinary College, UK
SOURCE: PCT Int. Appl., 102 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005002618	A1	20050113	WO 2004-GB2865	20040701
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,			

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

AU 2004253344	A1	20050113	AU 2004-253344	20040701
AU 2004253344	B2	20100429		
CA 2530797	A1	20050113	CA 2004-2530797	20040701
EP 1638599	A1	20060329	EP 2004-743211	20040701
EP 1638599	B1	20090916		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004012194	A	20060822	BR 2004-12194	20040701
CN 1845754	A	20061011	CN 2004-80025001	20040701
JP 2007526884	T	20070920	JP 2006-518335	20040701
EP 2050463	A2	20090422	EP 2008-75914	20040701
EP 2050463	A3	20100120		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LT, LV, MK				
NZ 544453	A	20090430	NZ 2004-544453	20040701
AT 442857	T	20091015	AT 2004-743211	20040701
NO 2005006207	A	20060131	NO 2005-6207	20051227
IN 2005DN06133	A	20071221	IN 2005-DN6133	20051229
KR 2006106809	A	20061012	KR 2006-7000080	20060102
MX 2006000278	A	20060407	MX 2006-278	20060105
ZA 2006000918	A	20070725	ZA 2006-918	20060131
US 20070098739	A1	20070503	US 2006-563199	20060901
US 20080220018	A1	20080911	US 2007-849931	20070904

PRIORITY APPLN. INFO.:

GB 2003-15323	A	20030701
EP 2004-743211	A3	20040701
WO 2004-GB2865	W	20040701
US 2006-563199	A3	20060901

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Vaccines comprising attenuated viruses and bacteria or
antigen-encoding nucleic acids and antibodies for treating canine
infectious respiratory disease

AB A vaccine composition for vaccinating dogs comprising any one or more of (a)
an agent capable of raising an immune response against *Streptococcus equi* sub
species *zooepidemicus* in a dog, (b) an agent capable of raising an immune
response against *Mycoplasma cynos* in a dog, and (c) an agent capable of
raising an immune response against a *Chlamydomphila* in a dog.

ST canine infectious respiratory disease vaccine antibody *Streptococcus*
Mycoplasma Chlamydomphila

IT rRNA
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(23 S; vaccines comprising attenuated viruses and
bacteria or antigen-encoding nucleic acids and antibodies for treating
canine infectious respiratory disease)

IT Glycoproteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(HE (hemagglutinin-esterase); vaccines comprising
attenuated viruses and bacteria or antigen-encoding nucleic
acids and antibodies for treating canine infectious respiratory
disease)

IT Immunostimulants
(adjuvants; vaccines comprising attenuated viruses

and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

- IT Saliva
(anal.; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Infection
(bacterial; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Samples
(biol.; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Drug delivery systems
(carriers; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Adsorbents
(immunoabsorbents; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Diagnosis
(immunodiagnosis; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Immunoassay
(immunosorbent; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Respiratory system, disease
(infection, canine; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Bronchi
(lavage; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Diagnosis
(serodiagnosis; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(spike; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Body fluid
(tracheal wash or bronchiolar lavage; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic

- acids and antibodies for treating canine infectious respiratory disease)
- IT Canine adenovirus
 - (type 2; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Adoptive immunotherapy
 - Blood serum
 - Bordetella bronchiseptica
 - Canid herpesvirus 1
 - Canidae
 - Canine parainfluenza virus
 - Canine respiratory coronavirus
 - Canis familiaris
 - Chlamydia muridarum
 - Chlamydia pecorum
 - Chlamydia pneumoniae
 - Chlamydia suis
 - Chlamydia trachomatis
 - Chlamydophila
 - Chlamydophila abortus
 - Chlamydophila felis
 - Chlamydophila psittaci
 - DNA sequences
 - Drug delivery systems
 - Labels
 - Mycoplasma cynos
 - Streptococcus
 - Streptococcus equi zoocpidemicus
 - Vaccines
 - Veterinary medicine
 - (vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Nucleic acids
 - RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 - (vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Antibodies and Immunoglobulins
 - Gene, animal
 - RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 - (vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Antigens
 - RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Infection
 - (viral; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Trachea (anatomical)

(wash; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT 827073-23-4P, DNA (chlamydia 23 S rRNA gene) 827073-24-5P
 827073-25-6P 827073-26-7P 827073-27-8P 827073-28-9P 827073-29-0P
 827073-30-3P
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
 PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (nucleotide sequence; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT 827073-86-9 827073-87-0
 RL: PRP (Properties)
 (unclaimed sequence; vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

L59 ANSWER 2 OF 41 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2009:316615 HCAPLUS Full-text
 DOCUMENT NUMBER: 151:418689
 TITLE: Strain typing of *Mycoplasma cynos* isolates from dogs with respiratory disease
 AUTHOR(S): Mannering, Sally A.; McAuliffe, Laura; Lawes, Joanna R.; Erles, Kerstin; Brownlie, Joe
 CORPORATE SOURCE: The Royal Veterinary College, Hatfield, AL9 7TA, UK
 SOURCE: Veterinary Microbiology (2009), 135(3-4), 292-296
 CODEN: VMICDQ; ISSN: 0378-1135
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Strain typing of *Mycoplasma cynos* isolates from dogs with respiratory disease

AB The association of *Mycoplasma cynos* with canine infectious respiratory disease is increasingly being recognized. This study describes the strain typing of 14 *M. cynos* isolates cultured from trachea and bronchoalveolar lavage samples of six dogs with respiratory disease, from two sep. kennels in the United Kingdom. The genetic similarity of the isolates was investigated using pulsed-field gel electrophoresis (PFGE) and random amplified polymorphic DNA (RAPD). Most of the isolates from four dogs housed at a re-homing kennel were genetically similar and some isolates from different dogs were indistinguishable by both PFGE and RAPD. These isolates were cultured from dogs with non-overlapping stays in the kennel, which may indicate maintenance of some strains within kennels. A small number of isolates showed much greater genetic heterogeneity and were genetically distinct from the main group of *M. cynos* strains. There was also a high degree of similarity of the *M. cynos* type strain (isolated from a dog with respiratory disease in Denmark in 1971) to at least one of the United Kingdom isolates using PFGE anal., which may suggest possible conservation of pathogenic strains of *M. cynos*.

IT Body fluid
 (bronchoalveolar lavage; mol. typing of *Mycoplasma cynos* isolates from dog with respiratory disease)

IT Respiratory system disease
 (infection; mol. typing of *Mycoplasma cynos* isolates from dog with respiratory disease)

IT Bordetella bronchiseptica
 Canid herpesvirus 1
 Canine respiratory coronavirus

Canis familiaris
 DNA sequences
 Dog
 Enterococcus
 Escherichia coli
 Mycoplasma canis
 Mycoplasma cynos
 Mycoplasma spumans
 Pasteurella
 RAPD analysis
 Streptococcus equi zooepidemicus
 Trachea
 Ureaplasma
 (mol. typing of Mycoplasma cynos isolates from dog
 with respiratory disease)

IT Infection
 (respiratory tract; mol. typing of Mycoplasma cynos
 isolates from dog with respiratory disease)
 IT Bronchitis
 (tracheobronchitis; mol. typing of Mycoplasma cynos
 isolates from dog with respiratory disease)

L59 ANSWER 3 OF 41 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2008:587539 HCAPLUS Full-text

DOCUMENT NUMBER: 148:536015

TITLE: OspC-specific borreliacidal antibody-killed
 OspC-expressing Borrelia, immune adjuvant,
 immunostimulant and other pathogen antigen as
 vaccine against canine Lyme disease

INVENTOR(S): Callister, Steven M.; Lafleur, Rhonda; Wasmoen, Terri
 L.

PATENT ASSIGNEE(S): Schering-Plough Ltd., Switz.

SOURCE: PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2008057396	A2	20080515	WO 2007-US23101	20071101
WO 2008057396	A3	20081016		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
AU 2007318026	A1	20080515	AU 2007-318026	20071101
CA 2668405	A1	20080515	CA 2007-2668405	20071101
US 20080181916	A1	20080731	US 2007-933583	20071101
KR 2009077018	A	20090713	KR 2009-7011395	20071101
EP 2077856	A2	20090715	EP 2007-861633	20071101

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA, HR, MK, RS

JP 2010509217	T	20100325	JP 2009-535321	20071101
IN 2009CN02457	A	20100319	IN 2009-CN2457	20090430
MX 2009004866	A	20090519	MX 2009-4866	20090506
ZA 2009003378	A	20100331	ZA 2009-3378	20090515
CN 101573135	A	20091104	CN 2007-80048874	20090629
PRIORITY APPLN. INFO.:			US 2006-864258P	P 20061103
			WO 2007-US23101	W 20071101

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

TI OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease

AB The present invention provides a ~~vaccine~~ for canine Lyme disease and methods of making and using the ~~vaccine~~ alone, or in combinations with other protective agents. The ~~vaccine~~ comprises OspC-expressing Borrelia killed in the presence of OspC-specific antibody elicited in an animal injected with Borrelia burgdorferi ss50772. The ~~vaccines~~ may also comprise an OspA- or OspB-expressing second strain of Borrelia genospecies and/or non-Borrelia pathogen.

ST OspC antibody killed Borrelia adjuvant immunostimulant pathogen antigen ~~vaccine~~; canine Lyme disease ~~vaccine~~ Borrelia burgdorferi OspA OspB OspC

IT Borrelia garinii
(ATCC Number 51383 or 51991; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)

IT Borrelia afzelii
(ATCC Number 51567; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)

IT Animalia
Animals
Bordetella bronchiseptica
Borrelia
Borrelia burgdorferi
Canidae
Canine adenovirus
Canine coronavirus
Canine distemper virus
Canine parainfluenza virus
Canine parvovirus
Drug delivery systems
Ehrlichia canis
Immune adjuvants
Immunostimulants
Influenza A virus
Leptospira
Lyme disease
Mycoplasma
Mycoplasma cynos
Pathogen
Pharmaceutical carriers
Pharmaceutical injections
Protein sequences
Rabies virus
Vaccines
(OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)

- IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Antibodies and Immunoglobulins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OspC-specific; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Anaplasma
(organism; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Leishmania
(organisms; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ospA (outer surface protein A); OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ospB (outer surface protein B); OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ospC (outer surface protein C); OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Drugs
(protective agent; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Leptospira interrogans
(serovar canicola; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Leptospira kirschneri
(serovar grippotyphosa; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Leptospira interrogans
(serovar icterohaemorrhagiae; OspC-specific borreliacidal antibody-killed OspC-expressing Borrelia, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT Leptospira interrogans

- (serovar pomona; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss 20006; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss 212; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss 50772 (ATCC Number PTA-439); OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss 61BV3; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss B-31 (ATCC Number 35210); OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss DK7; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss ESP1; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss HII; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss IP1, IP2, IP3; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss Mil; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss Ne-56; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss PlF; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss S-1-10 (ATCC Number PTA-1680); OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as ~~vaccine~~ against canine Lyme disease)
- IT *Borrelia burgdorferi*
(ss Z136; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen

as vaccine against canine Lyme disease)

IT *Borrelia burgdorferi*
(ss ZS7; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as vaccine against canine Lyme disease)

IT *Borrelia burgdorferi*
(ss ia; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as vaccine against canine Lyme disease)

IT *Borrelia burgdorferi*
(ss Pka; OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as vaccine against canine Lyme disease)

IT 199437-26-8
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(OspC-specific borreliacidal antibody-killed OspC-expressing *Borrelia*, immune adjuvant, immunostimulant and other pathogen antigen as vaccine against canine Lyme disease)

L59 ANSWER 4 OF 41 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1991:542224 HCAPLUS Full-text

DOCUMENT NUMBER: 115:142224

ORIGINAL REFERENCE NO.: 115:24267a, 24270a

TITLE: Complexes having adjuvant activity in vaccine preparation

INVENTOR(S): Mackenzie, Neill Moray; O'Sullivan, Angela Marie

PATENT ASSIGNEE(S): Cooper's Animal Health Ltd., UK

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
EP 415794	A1	19910306	EP 1990-309570	19900831
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 4981684	A	19910101	US 1989-426050	19891024
CA 2064911	A1	19910302	CA 1990-2064911	19900831
WO 9103256	A1	19910321	WO 1990-GB1351	19900831
W: AU, CA, HU, JP, SU				
AU 9063355	A	19910408	AU 1990-63355	19900831
AU 637405	B2	19930527		
DD 297331	A5	19920109	DD 1990-343761	19900831
ZA 9006977	A	19920527	ZA 1990-6977	19900831
HU 61205	A2	19921228	HU 1992-666	19900831
JP 05500056	T	19930114	JP 1990-512423	19900831
PL 168055	B1	19951230	PL 1990-286711	19900831
PL 168316	B1	19960229	PL 1990-308524	19900831
EP 766967	A1	19970409	EP 1996-202059	19900831
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5178860	A	19930112	US 1990-611543	19901207
LV 10394	B	19951020	LV 1993-753	19930629
PRIORITY APPLN. INFO.:			GB 1989-19819	A 19890901
			US 1989-426050	A3 19891024
			EP 1990-309570	A3 19900831
			WO 1990-GB1351	A 19900831

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS
RECORD (17 CITINGS)

TI Complexes having adjuvant activity in ~~vaccine~~ preparation

AB "Empty" iscom (immuno-stimulating complexes) matrixes, ie. formed without an antigen, have been found to provide an adjuvant formation for a sep. antigen in a ~~vaccine~~ formulation, the antigen being associated with a bacterium or mycoplasma. These and conventional iscoms can be formed without removing the solubilizing agent used for the antigen. In each case, the iscom can be 3-dimensional or, if formed without phospholipid, 2-dimensional. The glycoside is preferably Quil A and the sterol is preferably cholesterol.

ST immunostimulant complex adjuvant ~~vaccine~~

IT Phospholipids, biological studies
RL: PREP (Preparation)
(immunostimulant complex containing solubilizing agents and, in ~~vaccine~~ preparation)

IT Phosphatidylcholines, biological studies
RL: PREP (Preparation)
(immunostimulant complexes containing, in ~~vaccine~~ preparation)

IT ~~Vaccines~~
(preparation of, microbial antigen and glycoside complex with sterol in)

IT Actinobacillus
Bordetella
Bordetella pertussis
Campylobacter
Chlamydia
Clostridium
Escherichia
Haemophilus
Legionella
Listeria
Mycobacterium
Mycoplasma agalactiae
Mycoplasma agalactiae bovis
Mycoplasma arthritidis
Mycoplasma capricolum
Mycoplasma cynos
Mycoplasma dispar
Mycoplasma fermentans
Mycoplasma gallisepticum
Mycoplasma hominis
Mycoplasma hyopneumoniae
Mycoplasma hyorhinis
Mycoplasma mycoides
Mycoplasma orale
Mycoplasma ovipneumoniae
Mycoplasma pneumoniae
Mycoplasma pulmonis
Mycoplasma salivarium
Mycoplasma synoviae
Neisseria meningitidis
Pasteurella
Pseudomonas
Rickettsia
Salmonella
Spirochaeta
Staphylococcus
Streptococcus
Vibrio
(~~vaccine~~ preparation with immunostimulants and antigen of)

IT 57-13-6, Urea, biological studies 113-00-8, Guanidine 302-95-4, Sodium desoxycholate 41444-50-2 51651-58-2 85261-19-4 85261-20-7
 RL: BIOL (Biological study)
 (as solubilizing agent, immunostimulant complex containing in vaccine preparation)

IT 57-88-5, Cholesterol, biological studies 66594-14-7, Quil-A
 RL: BIOL (Biological study)
 (immunostimulant complex containing, in vaccine preparation)

L59 ANSWER 5 OF 41 MEDLINE on STN DUPLICATE 1
 ACCESSION NUMBER: 2010104306 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 20004265
 TITLE: Immunization with the attenuated plasmidless *Chlamydia trachomatis* L2(25667R) strain provides partial protection in a murine model of female genitourinary tract infection.
 AUTHOR: Olivares-Zavaleta Norma; Whitmire William; Gardner Donald; Caldwell Harlan D
 CORPORATE SOURCE: Laboratory of Intracellular Parasites, Rocky Mountain Laboratories, NIAID, NIH, 903 S 4th Street, Hamilton, MT 59840, USA.
 SOURCE: Vaccine, (2010 Feb 10) Vol. 28, No. 6, pp. 1454-62.
 Electronic Publication: 2009-12-08.
 Journal code: 8406899. E-ISSN: 1873-2518. L-ISSN: 0264-410X.
 Report No.: NLM-NIHMS167033 [Available on 02/10/11];
 NLM-PMC2821993 [Available on 02/10/11].
 PUB. COUNTRY: Netherlands
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, N.I.H., INTRAMURAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 201004
 ENTRY DATE: Entered STN: 16 Feb 2010
 Last Updated on STN: 22 Apr 2010
 Entered Medline: 21 Apr 2010

TI Immunization with the attenuated plasmidless *Chlamydia trachomatis* L2(25667R) strain provides partial protection in a murine model of female genitourinary tract infection.

AB Here we report on the safety, immunogenicity, and vaccine efficacy of the naturally occurring plasmid-free attenuated *Chlamydia trachomatis* L2-25667R (L2R) strain in a murine infection model. Intravaginal immunization induced both chlamydial specific serum antibody and systemic CD4(+) Th1 biased immune responses but failed to induce local IgA antibodies. Immunization induced no pathological changes in the urogenital tract. Protective immunity was evaluated by vaginal challenge with a natural occurring non-attenuated plasmid positive *C. trachomatis* urogenital strain (serovar D). Vaccinated mice were not protected from colonization/infection but exhibited a reduction in infectious burden at early time periods (1-2 weeks) post-challenge. Partial protective immunity did not protect against inflammatory disease. Thus, intravaginal vaccination with the live-attenuated L2R stain is safe, induces a systemic antibody and CD4(+) Th1 biased immune response, but its protective efficacy is limited to reducing chlamydial burden at early time periods post-infection.
 Published by Elsevier Ltd.

L59 ANSWER 6 OF 41 MEDLINE on STN DUPLICATE 2
 ACCESSION NUMBER: 2008297344 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 18359891
 TITLE: Surfactant protein D is expressed and modulates

inflammatory responses in human coronary artery smooth muscle cells.

AUTHOR: Snyder Gary D; Oberley-Deegan Rebecca E; Goss Kelli L; Romig-Martin Sara A; Stoll Lynn L; Snyder Jeanne M; Weintraub Neal L

CORPORATE SOURCE: Department of Internal Medicine, University of Iowa Carver College of Medicine, Iowa City, IA, USA.

CONTRACT NUMBER: 2T32 HL 07638-16 (United States NHLBI NIH HHS)
DK 25295 (United States NIDDK NIH HHS)
HL 070860 (United States NHLBI NIH HHS)
HL 076684 (United States NHLBI NIH HHS)
HL 50050 (United States NHLBI NIH HHS)
HL 62984 (United States NHLBI NIH HHS)

SOURCE: American journal of physiology. Heart and circulatory physiology, (2008 May) Vol. 294, No. 5, pp. H2053-9.
Electronic Publication: 2008-03-21.
Journal code: 100901228. ISSN: 0363-6135. L-ISSN: 0363-6135.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200806

ENTRY DATE: Entered STN: 8 May 2008
Last Updated on STN: 13 Jun 2008
Entered Medline: 12 Jun 2008

AB Surfactant protein D (SP-D) is a constituent of the innate ~~immune~~ system that plays a role in the host defense against lung pathogens and in modulating inflammatory ~~responses~~. While SP-D has been detected in extrapulmonary tissues, little is known about its expression and function in the vasculature. Immunostaining of human coronary artery tissue sections demonstrated immunoreactive SP-D protein in smooth muscle cells (SMCs) and endothelial cells. SP-D was also detected in isolated human coronary artery SMCs (HCASMCs) by PCR and immunoblot analysis. Treatment of HCASMCs with endotoxin (LPS) stimulated the release of IL-8, a proinflammatory cytokine. This release was inhibited >70% by recombinant SP-D. Overexpression of SP-D by adenoviral-mediated gene transfer in HCASMCs inhibited both LPS- and TNF-alpha-induced IL-8 release. Overexpression of SP-D also enhanced uptake of *Chlamydia pneumoniae* elementary bodies into HCASMCs while attenuating IL-8 production induced by bacterial exposure. Both LPS and TNF-alpha increased SP-D mRNA levels by five- to eightfold in HCASMCs, suggesting that inflammatory mediators upregulate the expression of SP-D. In conclusion, SP-D is expressed in human coronary arteries and functions as an anti-inflammatory protein in HCASMCs. SP-D may also participate in the host defense against pathogens that invade the vascular wall.

L59 ANSWER 7 OF 41 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 2008427232 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 18595462

TITLE: Biological and immunogenic characteristics of *Chlamydia trachomatis* strain MT-2A (serovar D) and its use for development of experimental ~~inactivated~~ vaccine.

AUTHOR: Poleshchuk N N; Rubanik L V; Kapitulets N N; Kvacheva Z B; Kostiuk S A; Chernoshei D A; Kapitulets S P; Titov L P

SOURCE: Zhurnal mikrobiologii, epidemiologii, i immunobiologii, (2008 May-Jun) No. 3, pp. 39-44.
Journal code: 0415217. ISSN: 0372-9311. L-ISSN: 0372-9311.

PUB. COUNTRY: Russia (Federation)
 DOCUMENT TYPE: (ENGLISH ABSTRACT)
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: Russian
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200808
 ENTRY DATE: Entered STN: 4 Jul 2008
 Last Updated on STN: 26 Aug 2008
 Entered Medline: 20 Aug 2008

- TI Biological and immunogenic characteristics of *Chlamydia trachomatis* strain MT-2A (serovar D) and its use for development of experimental inactivated vaccine.
- AB Biological characteristics of *C. trachomatis* author's strain MT-2A (serovar D) is presented. Stages of development on its basis the experimental formalin-inactivated vaccine against *Chlamydia* were described. Humoral and cellular immune response to the vaccine administered on 3-dose immunization schedule in conjunction with polyoxidonium as adjuvant was studied. Significant immunological efficacy of the vaccine was shown. T- and B-cell immune responses were characterized. Titer of IgG antibodies against *Chlamydia* in blood serum after 3rd dose of the vaccine was 10,880+/-1,817.76. Assessment of T-cell response showed that reaction of delayed hypersensitivity with formation of granuloma presented in 60% of animals. Proportion of immunoblasts in reaction of blast-transformation was 29.3+/-2.8%. Perspectives of further studies of the developed corpuscular vaccine against *Chlamydia* are discussed.

L59 ANSWER 8 OF 41 MEDLINE on STN DUPLICATE 5
 ACCESSION NUMBER: 2005100621 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 15731055
 TITLE: A live and inactivated *Chlamydia trachomatis* mouse pneumonitis strain induces the maturation of dendritic cells that are phenotypically and immunologically distinct.
 AUTHOR: Rey-Ladino Jose; Koochesfahani Kasra M; Zaharik Michelle L; Shen Caixia; Brunham Robert C
 CORPORATE SOURCE: University of British Columbia Centre for Disease Control, 655 West 12th Ave., Vancouver, BC V5Z 4R4, Canada.. robert.brunham@bccdc.ca
 SOURCE: Infection and immunity, (2005 Mar) Vol. 73, No. 3, pp. 1568-77.
 Journal code: 0246127. ISSN: 0019-9567. L-ISSN: 0019-9567. Report No.: NLM-PMC1064943.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200504
 ENTRY DATE: Entered STN: 1 Mar 2005
 Last Updated on STN: 2 Apr 2005
 Entered Medline: 1 Apr 2005

MEDLINE REFERENCE COUNT: 56 There are 56 cited references available in MEDLINE for this document.

- TI A live and inactivated *Chlamydia trachomatis* mouse pneumonitis strain induces the maturation of dendritic cells that are phenotypically and immunologically distinct.
- AB The intracellular bacterial pathogen *Chlamydia trachomatis* is a major cause of sexually transmitted disease worldwide. While protective immunity does appear to develop following natural chlamydial infection in humans, early vaccine trials using heat-killed *C. trachomatis* resulted in limited and transient

protection with possible enhanced disease during follow-up. Thus, immunity following natural infection with live chlamydia may differ from immune responses induced by immunization with inactivated chlamydia. To study this differing immunology, we used murine bone marrow-derived dendritic cells (DC) to examine DC maturation and immune effector function induced by live and UV-irradiated *C. trachomatis* elementary bodies (live EBs and UV-EB, respectively). DC exposed to live EBs acquired a mature DC morphology; expressed high levels of major histocompatibility complex (MHC) class II, CD80, CD86, CD40, and ICAM-1; produced elevated amounts of interleukin-12 and tumor necrosis factor alpha; and were efficiently recognized by Chlamydia-specific CD4+ T cells. In contrast, UV-EB-pulsed DC expressed low levels of CD40 and CD86 but displayed high levels of MHC class II, ICAM-1, and CD80; secreted low levels of proinflammatory cytokines; and exhibited reduced recognition by Chlamydia-specific CD4+ T cells. Adoptive transfer of live EB-pulsed DC was more effective than that of UV-EB-pulsed DC at protecting mice against challenge with live *C. trachomatis*. The expression of DC maturation markers and immune protection induced by UV-EB could be significantly enhanced by costimulation of DC ex vivo with UV-EB and oligodeoxynucleotides containing cytosine phosphate guanosine; however, the level of protection was significantly less than that achieved by using DC pulsed ex vivo with viable EBs. Thus, exposure of DC to live EBs results in a mature DC phenotype which is able to promote protective immunity, while exposure to UV-EB generates a semimature DC phenotype with less protective potential. This result may explain in part the differences in protective immunity induced by natural infection and immunization with whole inactivated organisms and is relevant to rational chlamydia vaccine design strategies.

L59 ANSWER 9 OF 41 MEDLINE on STN DUPLICATE 6
 ACCESSION NUMBER: 2005226481 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 15780483
 TITLE: Can worms defend our hearts? Chronic helminthic infections may attenuate the development of cardiovascular diseases.
 AUTHOR: Magen Eli; Borkow Gadi; Bentwich Zvi; Mishal Joseph; Scharf Shimon
 CORPORATE SOURCE: Ruth Ben-An Institute of Clinical Immunology & AIDS Center, Kaplan Medical Center, Hebrew University Hadassah Medical School, Rehovot, Israel.. elimgen2@netvision.net.il
 SOURCE: Medical hypotheses, (2005) Vol. 64, No. 5, pp. 904-9. Journal code: 7505668. ISSN: 0306-9877. L-ISSN: 0306-9877.
 PUB. COUNTRY: Scotland: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200507
 ENTRY DATE: Entered STN: 3 May 2005
 Last Updated on STN: 29 Jul 2005
 Entered Medline: 28 Jul 2005

AB The established risk factors for atherosclerosis fail to fully explain the extent and severity of coronary artery diseases in 50% of the patients. Thus, the causative agents and processes, which may be involved in the pathogenesis of atherosclerosis, are being sought. Notoriously, atherosclerosis and cardiovascular event rates are much lower in developing countries. Clinically, severe infections by intracellular pathogens are widespread mostly in developing countries with poor sanitation, nutrition and massive worm infections. A link between atherosclerosis and helminth infections has never been examined. Based on the present knowledge of immune and infectious mechanisms related to atherosclerosis, it is proposed that chronic helminthic infections can have a significant bearing on the epidemiology of cardiovascular diseases. How can helminthic infections affect the

cardiovascular risk? (1) Helminths evade or suppress host immune responses, by producing anti-inflammatory and other immunomodulatory molecules. (2) Helminths induce chronic Th2 activation, which can modify cytokine profiles and immunological responses to heat shock proteins, *Chlamydia pneumoniae* and cytomegalovirus. (3) The chronic Th2 profile may modulate monocyte activation and chemotaxis to inflammatory sites (atherosclerotic plaques). (4) Chronic Th2 activation may lead to a cytokine profile that could be beneficial for attenuation of atherosclerosis development (upregulation of IL-4, IL-10 and IL-13 and downregulation of proinflammatory cytokines). (5) Helminthic infections may reduce plasma LDL level not only by affecting the host nutrition, but also via modulation of naturally occurring antibodies to cholesterol. Studies are needed to clarify these suggestions. If the hypothesis that helminthic infections impact atherosclerosis is correct, it should be taken into consideration in atherosclerosis immunomodulation therapy and especially in the design of vaccines and vaccine trials.

L59 ANSWER 10 OF 41 MEDLINE on STN DUPLICATE 7
 ACCESSION NUMBER: 2002682876 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 12444139
 TITLE: GM-CSF transgene-based adjuvant allows the establishment of protective mucosal immunity following vaccination with inactivated *Chlamydia trachomatis*.
 AUTHOR: Lu Hang; Xing Zhou; Brunham Robert C
 CORPORATE SOURCE: British Columbia Center for Disease Control and Department of Medicine, University of British Columbia, Vancouver, Canada.
 SOURCE: Journal of immunology (Baltimore, Md. : 1950), (2002 Dec 1) Vol. 169, No. 11, pp. 6324-31.
 Journal code: 2985117R. ISSN: 0022-1767. L-ISSN: 0022-1767.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
 LANGUAGE: English
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
 ENTRY MONTH: 200212
 ENTRY DATE: Entered STN: 22 Nov 2002
 Last Updated on STN: 27 Dec 2002
 Entered Medline: 24 Dec 2002

TI GM-CSF transgene-based adjuvant allows the establishment of protective mucosal immunity following vaccination with inactivated *Chlamydia trachomatis*.

AB Cellular and humoral immune responses induced following murine *Chlamydia trachomatis* infection confer almost sterile protection against homologous reinfection. On the other hand, immunization with inactivated organism induces little protective immunity in this model system. The underlying mechanism(s) that determines such divergent outcome remains unclear, but elucidating the mechanism will probably be important for chlamydial vaccine development. One of the distinct differences between the two forms of immunization is that *chlamydia* replication in epithelial cells causes the secretion of a variety of proinflammatory cytokines and chemokines, such as GM-CSF, that may mobilize and mature dendritic cells and thereby enhance the induction of protective immunity. Using a murine model of *C. trachomatis* mouse pneumonitis lung infection and intrapulmonary adenoviral GM-CSF transfection, we demonstrate that the expression of GM-CSF in the airway compartment significantly enhanced systemic Th1 cellular and local IgA immune responses following immunization with inactivated organisms. Importantly, immunized mice had significantly reduced growth of *chlamydia* and exhibited less severe pulmonary inflammation following challenge infection. The site of GM-CSF transfection proved important, since mice immunized with inactivated

organisms after GM-CSF gene transfer by the i.p. route exhibited little protection against pulmonary challenge, although i.p. immunization generated significant levels of systemic Th1 immune responses. The obvious difference between i.p. and intrapulmonary immunization was the absence of lung IgA responses following i.p. vaccination. In aggregate, the findings demonstrate that the local cytokine environment is critical to the induction of protective immunity following chlamydial vaccination and that GM-CSF may be a useful adjuvant for a chlamydial vaccine.

L59 ANSWER 11 OF 41 MEDLINE on STN DUPLICATE 8
 ACCESSION NUMBER: 2003031119 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 12537725
 TITLE: Vaccine candidates in STD.
 AUTHOR: Fletcher Mark A
 CORPORATE SOURCE: Medical Affairs Department, Aventis Pasteur, 2, avenue Pont Pasteur, F-69367 Lyon Cedex 07, France.. FletchM@wyeth.com
 SOURCE: International journal of STD & AIDS, (2002 Dec) Vol. 13 Suppl 2, pp. 38-41.
 Journal code: 9007917. ISSN: 0956-4624. L-ISSN: 0956-4624.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; AIDS
 ENTRY MONTH: 200303
 ENTRY DATE: Entered STN: 23 Jan 2003
 Last Updated on STN: 25 Mar 2003
 Entered Medline: 24 Mar 2003

AB Sexually transmitted diseases (STDs) are caused by organisms that infect the mucosal surfaces of the genitourinary tract. In spite of its public health importance, current STD vaccine research lags behind work against pathogens that target another mucosal region, the respiratory tract. In the latter case, live-attenuated viral vaccines, killed whole-cell bacterial vaccines, subunit/protein bacterial vaccines, and bacterial polysaccharide vaccines have been enormously successful. To move STD vaccine research forward, complex issues must be resolved. Those include selection of an appropriate antigen (e.g. scientific feasibility and intellectual property rights), the manufacture of the vaccine (e.g. delivery systems, formulation processes, and production steps), and the appropriate public health approach (e.g. medical indications and marketing aspects). Particular scientific problems have delayed STD vaccine development, like incomplete attenuation (human herpes simplex virus type 2), accentuated immunopathology (*Chlamydia trachomatis*), poor immunogenicity (*Treponema pallidum*), and broad antigenic heterogeneity (*Neisseria gonorrhoeae*). Nevertheless, efforts continue with the use of protein antigens: for example, the haemolysin toxoid of *Haemophilus ducreyi*; the major outer membrane protein(s) of *N. gonorrhoeae* and *C. trachomatis*; the glycoprotein D of human herpes simplex virus type 2; and the proteins E6 and E7 of human papilloma virus. It may be predicted that eventual STD vaccines (administered either for prophylaxis or for therapy) will use approaches that include (1) live-attenuated viruses, (2) subunit proteins or inactivated whole organisms given with mucosal adjuvants or with cellular immune response adjuvants, and (3) DNA plasmids expressing the vaccine antigen.

L59 ANSWER 12 OF 41 MEDLINE on STN DUPLICATE 9
 ACCESSION NUMBER: 2001327825 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 11394975
 TITLE: Vaccine candidates in STD.
 AUTHOR: Fletcher M A
 CORPORATE SOURCE: Medical Affairs Department, Aventis Pasteur, 2 Avenue Pont

Pasteur, F-69367 Lyon Cedex 07, France.
 SOURCE: International journal of STD & AIDS, (2001 Jul) Vol. 12,
 No. 7, pp. 419-22. Ref: 12
 Journal code: 9007917. ISSN: 0956-4624. L-ISSN: 0956-4624.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals; AIDS
 ENTRY MONTH: 200108
 ENTRY DATE: Entered STN: 3 Sep 2001
 Last Updated on STN: 3 Sep 2001
 Entered Medline: 30 Aug 2001

REFERENCE COUNT: 12 There are 12 cited references for this document.

AB Sexually transmitted diseases (STDs) are caused by organisms that infect the mucosal surfaces of the genitourinary tract. In spite of its public health importance, particular scientific problems have delayed the development of an STD vaccine, such as incomplete ~~attenuation~~ (human herpes simplex virus type 2), accentuated immunopathology (*Chlamydia trachomatis*), poor immunogenicity (*Treponema pallidum*), and broad antigenic heterogeneity (*Neisseria gonorrhoeae*). Nevertheless, efforts continue with the use of protein antigens: for example, the haemolysin toxoid of *Haemophilus ducreyi*; the major outer membrane protein(s) of *N. gonorrhoeae* and *C. trachomatis*; the glycoprotein D of human herpes simplex virus type 2; and the proteins E6 and E7 of the human papillomavirus. It could be predicted that eventual STD vaccines (administered either for prophylaxis or for therapy) will use approaches that will include (1) live-attenuated viruses, (2) subunit proteins or inactivated whole organisms given with mucosal adjuvants or with cellular ~~immune response~~ adjuvants, or (3) DNA plasmids expressing the vaccine antigen.

L59 ANSWER 13 OF 41 MEDLINE on STN DUPLICATE 10
 ACCESSION NUMBER: 1999364773 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 10438062
 TITLE: Intranasal immunization with *Chlamydia trachomatis*, serovar E, protects from a subsequent vaginal challenge with the homologous serovar.
 AUTHOR: Peterson E M; You J Z; Motin V; de la Maza L M
 CORPORATE SOURCE: Department of Pathology, University of California, Irvine 92697-4800, USA.. epeterso@uci.edu
 CONTRACT NUMBER: AI-30499 (United States NIAID NIH HHS)
 AI-32248 (United States NIAID NIH HHS)
 SOURCE: Vaccine, (1999 Jul 16) Vol. 17, No. 22, pp. 2901-7.
 Journal code: 8406899. ISSN: 0264-410X. L-ISSN: 0264-410X.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199911
 ENTRY DATE: Entered STN: 11 Jan 2000
 Last Updated on STN: 11 Jan 2000
 Entered Medline: 22 Nov 1999

AB To vaccinate against a vaginal challenge with *Chlamydia trachomatis*, C3H/HeJ (H-2k) mice were immunized intranasally (i.n.) or intraperitoneally (i.p.) with 1 x 10(6) inclusion forming units (IFU) of *C. trachomatis*, serovar E and i.n. with 1 x 10(6) UV ~~inactivated~~ IFU of serovar E. Animals inoculated i.n. with mock infected HeLa 229 cells were used as controls. Upon a vaginal challenge with 5 x 10(3) IFU of serovar E, mice immunized i.n. with viable serovar E exhibited significant protection as judged by the number of mice

infected compared to controls ($p < 0.05$). In contrast, mice immunized i.n. with serovar E that had been UV-inactivated, were not protected from a subsequent vaginal challenge with serovar E. Mice immunized i.p. with serovar E showed attenuation of the infection by 4 weeks after challenge compared to control mice as to the number of animals with positive vaginal cultures ($p < 0.05$). Of the ~~immune~~ parameters examined, the best correlation with protection was seen with Chlamydia specific IgG and IgA vaginal titers and lymphoproliferative ~~responses~~ to serovar E. In summary, mucosal immunization with viable serovar E partially protected mice against a subsequent vaginal challenge, thereby showing that it is possible to elicit a protective ~~response~~ to a human strain of *C. trachomatis* at a distant mucosal site in this animal model.

L59 ANSWER 14 OF 41 MEDLINE on STN DUPLICATE 11
 ACCESSION NUMBER: 1999184977 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 10084993
 TITLE: Immunity to Chlamydia trachomatis mouse pneumonitis induced by vaccination with live organisms correlates with early granulocyte-macrophage colony-stimulating factor and interleukin-12 production and with dendritic cell-like maturation.
 AUTHOR: Zhang D; Yang X; Lu H; Zhong G; Brunham R C
 CORPORATE SOURCE: Department of Medical Microbiology, University of Manitoba, Winnipeg, Canada.
 SOURCE: Infection and immunity, (1999 Apr) Vol. 67, No. 4, pp. 1606-13.
 Journal code: 0246127. ISSN: 0019-9567. L-ISSN: 0019-9567.
 Report No.: NLM-PMC96503.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199904
 ENTRY DATE: Entered STN: 11 May 1999
 Last Updated on STN: 11 May 1999
 Entered Medline: 26 Apr 1999
 MEDLINE REFERENCE COUNT: 39 There are 39 cited references available in MEDLINE for this document.

AB As is true for other intracellular pathogens, immunization with live *Chlamydia trachomatis* generally induces stronger protective immunity than does immunization with ~~inactivated~~ organism. To investigate the basis for such a difference, we studied ~~immune responses~~ in BALB/c mice ~~immunized~~ with viable or UV-killed *C. trachomatis* mouse pneumonitis (MoPn). Strong, acquired resistance to *C. trachomatis* infection was elicited by immunization with viable but not dead organisms. Immunization with viable organisms induced high levels of antigen-specific delayed-type hypersensitivity (DTH), gamma interferon production, and immunoglobulin A (IgA) responses. Immunization with inactivated MoPn mainly induced interleukin-10 (IL-10) production and IgG1 antibody without IgA or DTH responses. Analysis of local early cytokine and cellular events at days 3, 5, and 7 after peritoneal cavity immunization showed that high levels of granulocyte-macrophage colony-stimulating factor and IL-12 were detected with viable but not inactivated organisms. Furthermore, enrichment of a dendritic cell (DC)-like population was detected in the peritoneal cavity only among mice immunized with viable organisms. The results suggest that early differences in inducing proinflammatory cytokines and activation and differentiation of DCs may be the key mechanism underlying the difference between viable and inactivated organisms in inducing active immunity to *C. trachomatis* infection.

L59 ANSWER 15 OF 41 MEDLINE on STN DUPLICATE 12
 ACCESSION NUMBER: 2000016528 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 10547436
 TITLE: Immunogenic and protective ability of the two developmental forms of Chlamydiae in a mouse model of infertility.
 AUTHOR: Pal S; Rangel J; Peterson E M; de la Maza L M
 CORPORATE SOURCE: Department of Pathology, Medical Sciences I, Room D440, University of California, Irvine, 92697-4800, USA.. spal@uci.edu
 CONTRACT NUMBER: AI-30499 (United States NIAID NIH HHS)
 AI-32248 (United States NIAID NIH HHS)
 SOURCE: Vaccine, (1999 Nov 12) Vol. 18, No. 7-8, pp. 752-61.
 Journal code: 8406899. ISSN: 0264-410X. L-ISSN: 0264-410X.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200001
 ENTRY DATE: Entered STN: 9 Feb 2000
 Last Updated on STN: 9 Feb 2000
 Entered Medline: 28 Jan 2000

AB To compare the ability of elementary bodies (EB) and reticulate bodies (RB) of the *Chlamydia trachomatis* mouse pneumonitis (MoPn) biovar to induce a protective immune response, two groups of BALB/c mice were inoculated and boosted twice, with UV-inactivated EB or RB in Freund's adjuvant. Two weeks after the last immunization mice were challenged with *C. trachomatis* in the ovarian bursa. Vaginal cultures collected for 6 weeks after the intrabursal challenge showed that mice inoculated with EB were significantly protected, while mice inoculated with RB were not. Six weeks after the genital challenge mice were mated. Mice immunized with EB showed significant protection as demonstrated by the number of animals which were fertile and the number of embryos present in the uterine horns. In contrast, no significant protection against infertility was observed in the mice immunized with RB.

L59 ANSWER 16 OF 41 MEDLINE on STN DUPLICATE 13
 ACCESSION NUMBER: 1992065225 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 1720166
 TITLE: *Chlamydia trachomatis* major outer membrane protein epitopes expressed as fusions with LamB in an attenuated aro A strain of *Salmonella typhimurium*; their application as potential immunogens.
 AUTHOR: Hayes L J; Conlan J W; Everson J S; Ward M E; Clarke I N
 CORPORATE SOURCE: Department of Microbiology, University of Southampton Medical School, Southampton General Hospital.
 SOURCE: Journal of general microbiology, (1991 Jul) Vol. 137, No. 7, pp. 1557-64.
 Journal code: 0375371. ISSN: 0022-1287. L-ISSN: 0022-1287.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-D90254; GENBANK-M33536; GENBANK-M36026;
 GENBANK-M36027; GENBANK-M36028; GENBANK-M36029;
 GENBANK-M36030; GENBANK-M36031; GENBANK-M36032;
 GENBANK-M55528; GENBANK-M58938

ENTRY MONTH: 199201

ENTRY DATE: Entered STN: 24 Jan 1992

Last Updated on STN: 29 Jan 1996

Entered Medline: 2 Jan 1992

TI *Chlamydia trachomatis* major outer membrane protein epitopes expressed as fusions with LamB in an attenuated aro A strain of *Salmonella typhimurium*; their application as potential immunogens.

AB The major outer-membrane protein (MOMP) of *Chlamydia trachomatis* is the focus of attention for chlamydial vaccine design, particularly those serovar- and subspecies-specific epitopes which provoke neutralizing immune responses. Selected surface-exposed B-cell epitopes of MOMP, incorporating B-subspecies specificities, were expressed as fusions with LamB, an inducible outer-membrane transport protein of *Escherichia coli*. These recombinant chlamydial-LamB proteins were correctly transported to the outer membrane of both *E. coli* and an aro A mutant of *Salmonella typhimurium*. The immunogenicity of the constructs was investigated in a mouse model of chlamydial salpingitis. After oral immunization, recombinant *S. typhimurium* were recovered from the livers of mice for up to two weeks, and a serum IgG response was induced both to the *Salmonella* and to the inserted chlamydial epitopes. By contrast, intravenous inoculation was ineffective. Although these LamB fusions proved only weakly immunogenic, this approach should be useful for investigating the ability of attenuated *S. typhimurium* vaccines incorporating chlamydial epitopes to stimulate protective mucosal immunity in the mouse model of chlamydial salpingitis.

L59 ANSWER 17 OF 41

MEDLINE on STN

DUPLICATE 14

ACCESSION NUMBER: 1984187065 MEDLINE Full-text

DOCUMENT NUMBER: PubMed ID: 6715899

TITLE: Immune response of owl monkeys to topical vaccination with irradiated *Chlamydia trachomatis*.

AUTHOR: MacDonald A B; McComb D; Howard L

SOURCE: The Journal of infectious diseases, (1984 Mar) Vol. 149, No. 3, pp. 439-42.

Journal code: 0413675. ISSN: 0022-1899. L-ISSN: 0022-1899.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 198406

ENTRY DATE: Entered STN: 19 Mar 1990

Last Updated on STN: 3 Feb 1997

Entered Medline: 18 Jun 1984

TI Immune response of owl monkeys to topical vaccination with irradiated *Chlamydia trachomatis*.

AB The conjunctivae of owl monkeys were topically vaccinated with purified *Chlamydia trachomatis* organisms that had been inactivated by ⁶⁰Co irradiation and lyophilized onto an inert carrier. Vaccinated monkeys developed antibody in serum and tears, while control animals given a placebo had no detectable titers. When challenged 35 days after the start of administration of the vaccine, all monkeys showed evidence of infection. The vaccinated group had a longer course of disease and more ocular discharge than did controls. Antibody levels in both serum and tears were nearly 10-fold higher after infection in vaccinated animals than in controls.

L59 ANSWER 18 OF 41 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

ACCESSION NUMBER: 2010:287047 BIOSIS Full-text

DOCUMENT NUMBER: PREV201000287047

TITLE: Identification of immunodominant antigens of Chlamydia trachomatis using proteome microarrays.

AUTHOR(S): Molina, Douglas M.; Pal, Sukumar; Kayala, Mathew A.; Teng, Andy; Kim, Paul J.; Baldi, Pierre; Felgner, Philip L.; Liang, Xiaowu; de la Maza, Luis M. [Reprint Author]

CORPORATE SOURCE: Univ Calif Irvine, Dept Pathol, Room D440, Irvine, CA 92697
USA
lmdelama@uci.edu

SOURCE: Vaccine, (APR 9 2010) Vol. 28, No. 17, pp. 3014-3024.
CODEN: VACCDE. ISSN: 0264-410X.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 19 May 2010
Last Updated on STN: 19 May 2010

AB Chlamydia trachomatis is the most common bacterial sexually transmitted pathogen in the world. In order to control this infection there is an urgent need to formulate a vaccine. Identification of protective antigens is required to implement a subunit vaccine. To identify potential antigen vaccine candidates, three strains of mice, BALB/c, C3H/HeN and C57BL/6, were inoculated with live and inactivated C. trachomatis mouse pneumonitis (MoPn) by different routes of immunization. Using a protein microarray, serum samples collected after immunization were tested for the presence of antibodies against specific chlamydial antigens. A total of 225 open reading frames (ORF) of the C. trachomatis genome were cloned, expressed, and printed in the microarray. Using this protein microarray, a total of seven C. trachomatis dominant antigens were identified (TC0052, TC0189, TC0582, TC0660, TC0726, TC0816 and, TC0828) as recognized by IgG antibodies from all three strains of animals after immunization. In addition, the microarray was probed to determine if the antibody response exhibited a Th1 or Th2 bias. Animals immunized with live organisms mounted a predominant Th1 response against most of the chlamydial antigens while mice immunized with inactivated Chlamydia mounted a Th2-biased response. In conclusion, using a high throughput protein microarray we have identified a set of novel proteins that can be tested for their ability to protect against a chlamydial infection. (C) 2009 Elsevier Ltd. All rights reserved.

IT Major Concepts

Pharmacology; Infection; Methods and Techniques; Immune System
(Chemical Coordination and Homeostasis); Reproductive System
(Reproduction)

IT Parts, Structures, & Systems of Organisms

serum: blood and lymphatics; Th1 cell: immune system, blood and lymphatics; Th2 cell: immune system, blood and lymphatics

IT Diseases

chlamydial infection: bacterial disease, reproductive system disease, etiology, prevention and control
Chlamydia Infections (MeSH)

IT Chemicals & Biochemicals

IgG antibody [immunoglobulin G antibody]; open reading frame [ORF]: expression; Chlamydia trachomatis TC0052 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0189 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0582 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0660 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0726 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0816 immunodominant antigen: immunologic-drug, immunostimulant-drug; Chlamydia trachomatis TC0828 immunodominant antigen: immunologic-drug, immunostimulant-drug; live Chlamydia trachomatis mouse pneumonitis: immunologic-drug, immunostimulant-drug; inactivated Chlamydia trachomatis mouse pneumonitis:

immunologic-drug, immunostimulant-drug

L59 ANSWER 19 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2010-A66383 [201011] WPIX
 CROSS REFERENCE: 2009-B09659; 2010-A02004
 TITLE: New modified vaccinia virus Ankara (MVA) expressing
 Chlamydia polypeptide, useful for inducing an immune
 response against Chlamydia, or for treating,
 preventing, or reducing the symptoms of Chlamydia
 infection
 DERWENT CLASS: A96; B04; C06; D16
 INVENTOR: JACKSON W J
 PATENT ASSIGNEE: (EMER-N) EMERGENT PROD DEV GAITHERSBURG INC
 COUNTRY COUNT: 124

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2010005474	A1	20100114	(201011)*	EN	104	[13]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2010005474	A1	WO 2009-US3599	20090616

PRIORITY APPLN. INFO: US 2008-118388P 20081126
 WO 2008-US7490 20080616

TI New modified vaccinia virus Ankara (MVA) expressing Chlamydia polypeptide,
 useful for inducing an immune response against Chlamydia, or for
 treating, preventing, or reducing the symptoms of Chlamydia infection

TT TT: NEW MODIFIED VACCINIA VIRUS EXPRESS CHLAMYDIA POLYPEPTIDE USEFUL
 INDUCE IMMUNE RESPOND TREAT PREVENT REDUCE SYMPTOM INFECT

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) an isolated MVA
 comprising a polynucleotide which encodes a Chlamydia polypeptide
 comprising an amino acid sequence at least 80% identical to SEQ ID NO: 48,
 where the Chlamydia polypeptide specifically binds to an antibody raised
 against SEQ ID NO: 48; (2) a host cell comprising the MVA above; (3) a
 method of producing a polypeptide by culturing the host cell of (2), and
 recovering the polypeptide; (4) an isolated polypeptide produced by the
 method of (3); (5) a composition comprising the MVA, host cell, or
 polypeptide above, and a pharmaceutical carrier and/or diluent; (6) a kit
 comprising (a) the MVA, host cell, polypeptide, or composition, and (b) a
 means for administering the recombinant MVA, host cell, polypeptide or
 composition; (7) a method of inducing an immune response against
 Chlamydia in a subject by administering to the subject an amount of the
 MVA, host cell, polypeptide, or composition, or their combination either
 simultaneously or in any order; (8) a method for treating, preventing, or
 reducing the symptoms of a Chlamydia infection or a condition associated
 with a Chlamydia infection in a subject by administering to the subject an
 amount of the MVA, host cell, polypeptide, or composition above, or their
 combination either simultaneously or in any order; (9) a method for
 attenuating or ameliorating a symptom caused by a Chlamydia infection or a
 condition associated with a Chlamydia infection in a subject by
 administering to the subject an amount of the MVA, host cell, polypeptide,
 or composition, or their combination either simultaneously or in any
 order; (10) a method of reducing the risk of HIV-related AIDS in a subject
 by administering the MVA, host cell, polynucleotide, polypeptide, or
 composition above to the subject; and (11) a method of producing a vaccine

against Chlamydia by (a) isolating the MVA, host cell, or polypeptide, or their combination, and (b) adding an adjuvant to the isolated MVA, host cell, polynucleotide, or polypeptide of (a).

USE

USE - The MVA, host cell, polypeptide, composition, and vaccine are useful for inducing an immune response against Chlamydia; for treating, preventing, or reducing the symptoms of a Chlamydia infection or a condition associated with a Chlamydia infection; for attenuating or ameliorating a symptom caused by a Chlamydia infection or a condition associated with a Chlamydia infection; and for reducing the risk of HIV-related AIDS. The Chlamydia infection is a *C. trachomatis* or *C. pneumoniae* infection. The condition associated with a Chlamydia infection is associated with a *C. trachomatis* infection and is selected from, but not limited to, urethritis, endometritis, pelvic inflammatory disease, tubal factor infertility, chronic pelvic pain, cervical dysplasia, ectopic pregnancy, newborn eye infection, newborn lung infection, trachoma and reactive arthritis. The condition associated with a Chlamydia infection is associated with a *C. pneumoniae* infection and is selected from, but not limited to, pneumonia, acute respiratory disease, atherosclerosis, coronary artery disease, myocardial infarction, cerebrovascular disease, coronary heart disease, aortic aneurysm, stroke, chronic obstructive pulmonary disease, asthma, and sarcoidosis (all claimed).

TECH

BIOTECHNOLOGY - Preferred MVA: An isolated MVA comprises a polynucleotide which encodes a Chlamydia polypeptide comprising an amino acid sequence at least 80% identical to SEQ ID NO: 48, where the Chlamydia polypeptide specifically binds to an antibody raised against SEQ ID NO: 48. The Chlamydia polypeptide comprises SEQ ID NO: 11 or 48. The polynucleotide comprises SEQ ID NO: 10, 12, or 47. The Chlamydia polypeptide comprises amino acid 29-1012 of SEQ ID NO: 44 or amino acids 18-1000 of SEQ ID NO: 46. The polynucleotide further comprises a nucleic acid sequence encoding a signal peptide fused to the Chlamydia polypeptide. The polynucleotide encoding a Chlamydia polypeptide is operably associated with a promoter capable of driving expression of the Chlamydia polypeptide in cells infected with the MVA. The polynucleotide encoding a Chlamydia polypeptide is codon-optimized. The MVA further comprises a polynucleotide encoding an additional Chlamydia polypeptide selected from a PmpG polypeptide, a PmpI polypeptide, a PmpE polypeptide, a PmpH polypeptide, an HtrA polypeptide, a MOMP polypeptide, a PmpD polypeptide, an OmeB polypeptide, an OmpH polypeptide, an immunogenic fragment of any of the Chlamydia polypeptides, and a combination of any of the Chlamydia polypeptides or fragments. The MVA further comprises a polynucleotide encoding a heterologous polypeptide. The MVA is attenuated. The MVA is not capable of replicating in human cells. The MVA is capable of replicating in an avian cell. The polynucleotide is inserted in the MVA genome within a naturally occurring deletion site selected from deletion site 1; deletion site 2; deletion site 3; deletion site 4; deletion site 5; and deletion site 6. The MVA induces an immune response against Chlamydia sp. when administered to a subject. The MVA is capable of preventing, ameliorating, or treating a disease or condition associated with Chlamydia. Sequences not defined here may be found at <ftp://ftp.wipo.int/pub/publishedpctsequences/publication>. Preferred Host Cell: The host cell is an avian cell. The host cell is immortalized. The host cell is a duck cell, where the host cell is AGE1cr, AGE1cr.pIX, or EB66. Preferred Composition: The composition further comprises an adjuvant selected from alum, bentonite, latex and acrylic particles, pluronic block polymers, squalene, depot formers, surface active materials, lysolecithin, retinal, Quil A, liposomes, and pluronic polymer formulations; macrophage stimulators, alternate pathway complement activators, non-ionic surfactants bacterial components, aluminum-based salts; calcium-based

salts; silica; polynucleotides; toxoids; serum proteins, viruses and virally-derived materials, poisons, venoms, imidazoquiniline compounds, poloxamers, toll-like receptors (TLR) agonists, mLT, CpG, MPL, cationic lipids, Qs21, and a combination of two or more of the adjuvants. Preferred Method: In the method of inducing an immune response against Chlamydia in a subject, the immune response comprises an antibody response. The immune response comprises a cell-mediated immune response. The immune response comprises a cell-mediated immune response and an antibody response. The immune response is a mucosal immune response. In the method for treating, preventing, or reducing the symptoms of a Chlamydia infection or a condition associated with a Chlamydia infection in a subject, or for attenuating or ameliorating a symptom caused by a Chlamydia infection or a condition associated with a Chlamydia infection in a subject, the subject is an animal, where the subject is a vertebrate, where the vertebrate is a mammal, and where the mammal is a human. The subject currently has or previously had a Chlamydia trachomatis infection, where the Chlamydia infection is recurrent. The subject is at risk of a C. trachomatis or Chlamydia pneumoniae infection. The method of reducing the risk of HIV-related ADS in a subject further comprises at least one booster immunization. The booster immunization comprises administering a vaccine composition. The vaccine composition is a DNA vaccine or polypeptide vaccine. The vaccine composition is the MVA, host cell, polypeptide, or composition, or their combination.

L59 ANSWER 20 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2010-A02004 [201007] WPIX
 CROSS REFERENCE: 2009-B09659
 TITLE: New attenuated Salmonella microorganism comprising an attenuating mutation in a Salmonella Pathogenicity Island 2 gene, useful for the treatment or prevention of a Chlamydial infection or related condition, e.g. urethritis and prostatic
 DERWENT CLASS: B03; B04; B07; C06; D16
 INVENTOR: LACY M J; REDFERN M R; TELFER J L
 PATENT ASSIGNEE: (EMER-N) EMERGENT PROD DEV UK LTD
 COUNTRY COUNT: 124

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
WO 2009158240	A1	20091230	(201007)*	EN	108	[22]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2009158240	A1	WO 2009-US47542	20090616

PRIORITY APPLN. INFO: US 2008-118204P 20081126
 WO 2008-US7490 20080616

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) a composition of the treatment or prevention of a Chlamydial infection or related condition comprising the attenuated Salmonella microorganism above, and a carrier and/or diluents; (2) a method for vaccinating a subject against a Chlamydial infection comprising administering the microorganism above or the composition of (1); (3) a method for preventing or ameliorating a condition associated with a Chlamydial infection comprising administering the microorganism above or the composition of (1); (4) a method of

eliciting an immune response in a subject comprising administering the microorganism above or the composition of (1); (5) a method of reducing the risk of human immunodeficiency virus-related AIDS in a subject comprising administering the microorganism above or the composition of (1); and (6) an antibody to an attenuated Salmonella microorganism above.

USE

USE - The attenuated Salmonella microorganism is useful for the treatment or prevention of a Chlamydial infection or related condition; vaccinating a subject against a Chlamydial infection; preventing or ameliorating a condition associated with a Chlamydial infection; eliciting an immune response; and reducing the risk of human immunodeficiency virus-related AIDS, where the condition associated with a Chlamydial infection is associated with a C. trachomatis infection, e.g. urethritis, prostatic, proctitis, epididymitis, cervicitis, salpingitis, endometritis, pelvic inflammatory disease, tubal factor infertility, chronic pelvic pain, cervical dysplasia, ectopic pregnancy, lymphogranuloma venereum (LGV), newborn eye infection, newborn lung infection, trachoma and reactive arthritis; or it is associated with a C. pneumoniae infection, e.g. pneumonia, acute respiratory disease, atherosclerosis, coronary artery disease, myocardial infarction, carotid artery disease, cerebrovascular disease, coronary heart disease, carotid artery stenosis, aortic aneurysm, claudication, stroke, chronic obstructive pulmonary disease, asthma, reactive airway disease, Reiter's syndrome and sarcoidosis (all claimed).

TECH

BIOTECHNOLOGY - Preferred Microorganism: In the attenuated Salmonella microorganism, the cell induces an effective immune response when administered to a human patient. The second gene is a Salmonella gene involved in the biosynthesis of aromatic compounds, preferably aroC. The SPI-2 gene is ssa, sse, ssc, or ssr gene, preferably ssa gene. The ssa gene is ssaV, ssaJ, ssaU, ssaK, ssaL, ssaM, ssaO, ssaP, ssaQ, ssaR, ssaS, ssaT, ssaU, ssaD, ssaE, ssaG, ssaI, ssaC (spiA), or ssaH, preferably ssaV or ssaJ. The SPI-2 gene is an sse gene, e.g. sseA, sseB, sseC, sseD, sseE, sseF, sseG, sseL and spiC (ssaB). The attenuating mutation in the SPI-2 gene is a deletion or inactivation of the SPI-2 gene, and where the attenuating mutation in the second gene is a deletion or inactivation of the second gene. The attenuated Salmonella cell is derived from Salmonella enterica serovar Typhi ZH9. The gene expression cassette is inserted at the SPI-2 gene deletion site and/or the second gene deletion site. The SPI-2 deletion site is an ssaV gene deletion site and the second gene deletion site is an aroC deletion site. The inducible promoter is a prokaryotic promoter induced under acidic or oxidative conditions. The inducible promoter is induced in macrophages. The inducible promoter is an in vivo inducible promoter, preferably a Salmonella ssaG promoter. The Chlamydial peptide is secreted from the microorganism via a secretion signal. The secretion signal comprises a ClyA secretion signal or its non-hemolytic derivative. The secretion signal comprises an Escherichia coli CS3 secretion signal. The heterologous nucleic acid encoding an immunogenic Chlamydial peptide is codon optimized for gene expression in Salmonella or E. coli. The heterologous nucleic acid has a G/C content of 50%. The immunogenic Chlamydial peptide is PmpG, PmpI, PmpE, MOMP, PmpD, PmpH, OmcB, OmpH, or HtrA or their immunogenic fragment, preferably PmpG or its fragment. The PmpG or its fragment binds to an antibody to PmpG. The PmpG fragment comprises at least 25 contiguous amino acids of PmpG. The PmpG or its fragment is CT84, CT110, or CT40. The Chlamydial peptide is a Chlamydia trachomatis peptide, Chlamydia pneumoniae, or a Chlamydia muridarum peptide. The gene expression cassette further comprises a nucleic acid encoding a linker peptide. The attenuated Salmonella microorganism is S. enterica serovar Typhi, S. enterica serovar Typhimurium, S. enterica serovar Paratyphi, S. enterica serovar

Enteritidis, S. enterica serovar Choleraesuis, S. enterica serovar Gallinarum, S. enterica serovar Dublin, S. enterica serovar Hadar, S. enterica serovar Infantis, and S. enterica serovar Pullorum. The microorganism is modified to express reduced or no lipopolysaccharide (LPS). The microorganism is further modified to express one or more cytokines or chemokines. The cytokine is an interferon. Preferred Composition: The composition further comprises an adjuvant, e.g. CpG oligodeoxynucleotide adjuvant, aluminum salt (e.g., aluminum hydroxide, aluminum oxide and aluminum phosphate), oil-based adjuvant (e.g., Freund's Complete Adjuvant and Freund's Incomplete Adjuvant), mycolate-based adjuvant (e.g., trehalose dimycolate), bacterial LPS, peptidoglycan (e.g., murein, mucopeptide or glycoproteins such as N-Opaca, muramyl dipeptide (MDP), or MDP analog), proteoglycan (e.g., extracted from Klebsiella pneumoniae), streptococcal preparation (e.g., OK432), muramyl dipeptide, Immune Stimulating Complex, saponin, diethylamino ethanol (DEAE)-dextran, neutral oil (e.g., miglyol), vegetable oil (e.g., arachis oil), liposome, polyol, Ribi adjuvant, vitamin E, Carbopol and interleukin. Preferred Method: In the methods, administering the microorganism or composition to the subject induces cell-mediated immunity or a mucosal immunoglobulin A (IgA) response. The Chlamydial infection is a C. trachomatis, C. pneumoniae, or C. muridarum infection. The subject preferably has or had a C. trachomatis infection. The Chlamydial infection is recurrent. In the method, the subject is at risk of a C. trachomatis, C. pneumoniae, or C. muridarum infection. Reducing the risk of human immunodeficiency virus-related AIDS further comprises a booster immunization.

L59 ANSWER 21 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2009-R63316 [201001] WPIX
 TITLE: New PrfA mutant Listeria, useful for inducing and enhancing an immune response, and for preventing or treating a non-Listerial infectious and cancerous condition
 DERWENT CLASS: B02; B04; D16
 INVENTOR: BROCKSTEDT D G; DUBENSKY T W; HANSON W; LAUER P M; LUCKETT W S; SKOBLE J
 PATENT ASSIGNEE: (ANZA-N) ANZA THERAPEUTICS INC
 COUNTRY COUNT: 122

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2009143085	A1	20091126	(201001)*	EN	128	[7]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2009143085	A1	WO 2009-US44408	20090518

PRIORITY APPLN. INFO: US 2008-54454P 20080519

TI New PrfA mutant Listeria, useful for inducing and enhancing an immune response, and for preventing or treating a non-Listerial infectious and cancerous condition

TT TT: NEW MUTANT LISTERIA USEFUL INDUCE ENHANCE IMMUNE RESPOND PREVENT TREAT NON INFECT CANCER CONDITION

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) a pharmaceutical composition comprising the recombinant Listeria bacterium above and one or more of a pharmaceutical excipient, an adjuvant and a costimulatory

molecule; (2) a method of inducing an immune response in a host to a non-Listerial antigen by administering to the host an amount of a composition comprising a recombinant *Listeria* bacterium above; (3) a method of enhancing the immunogenicity of a non-Listerial antigen in a host by administering to the host an amount of a composition comprising a recombinant *Listeria* bacterium above; (4) a method of preventing or treating a non-Listerial infectious or cancerous condition in a host by administering to the host an amount of a composition comprising a recombinant *Listeria* bacterium above; (5) a method for enhancing an immune response in a mammal to a non-Listerial antigen by administering to the mammal an amount of a boost dose of a recombinant *Listeria* above that encodes the non-Listerial antigen, where the mammal previously had been administered an effective amount of a prime dose of a vaccine that provided the non-Listerial antigen, where: (a) the vaccine does not contain live, metabolically active *Listeria* that encode the non-Listerial antigen, and (b) when the vaccine contains naked DNA encoding the non-Listerial antigen; and (6) a method of preparing a recombinant *Listeria* bacterium above.

USE

USE - The bacterium and composition are useful for inducing and enhancing an immune response, for enhancing the immunogenicity of a non-Listerial antigen, and for preventing or treating a non-Listerial infectious and cancerous condition (all claimed).

TECH

BIOTECHNOLOGY - Preferred Bacterium: The PrfAasterisk mutant polypeptide comprises a mutation selected from Tyr63Cys, Glu77Lys, Leu149Phe, Gly145Ser, Gly155Ser (preferred) and Ser183Ala. The recombinant polynucleotide encodes a fusion protein comprising a signal peptide and the heterologous polypeptide. The prfA responsive regulatory element is selected from a hly promoter, a plcA promoter, a plcB promoter, a mpl promoter, a hpt promoter, an inlC promoter, an inlA promoter, an inlB promoter, a prfA promoter and an actA promoter (preferred). The signal peptide is a signal peptide selected from an ActA signal peptide from *Listeria monocytogenes* (preferred), an LLO signal peptide from *L. monocytogenes*, a Usp45 signal peptide from *Lactococcus lactis*, a Protective Antigen signal peptide from *Bacillus anthracis*, a p60 signal peptide from *L. monocytogenes*, a PhoD signal peptide from *Bacillus subtilis*, a secA2 signal peptide and a Tat signal peptide. The fusion protein comprises the first 100 amino acids of ActA. The heterologous polypeptide comprises an antigen selected from a tumor-associated antigen, a polypeptide derived from a tumor-associated antigen, an infectious disease antigen, and a polypeptide derived from an infectious disease antigen. The infectious disease antigen is from a virus or a heterologous infectious pathogen selected from a hepatitis virus, an influenza virus, a HIV, papillomavirus, a herpes simplex virus 1, a herpes simplex virus 2, a cytomegalovirus, a *Mycobacterium tuberculosis*, a *Plasmodium falciparum* or a *Chlamydia trachomatis*. The infectious disease antigen is from a hepatitis A virus, a hepatitis B virus, or a hepatitis C virus. The *Listeria* bacterium belongs to the species *L. monocytogenes*. The recombinant *Listeria* bacterium is attenuated for one or more of cell-to-cell spread, entry into non-phagocytic cells, proliferation or DNA repair. The *Listeria* is attenuated by one or more of: an actA mutation; an inlB mutation; a uvrA mutation; a uvrB mutation; a uvrC mutation; a nucleic acid targeted compound; or a uvrAB mutation and a nucleic acid targeting compound. The nucleic acid targeting compound is a psoralen. The nucleic acid of the bacterium has been modified by reaction with a nucleic acid targeting compound that reacts directly with the nucleic acid so that the bacterium is attenuated for proliferation. The bacterium comprises nucleic acid cross-links that attenuate the modified bacterium for proliferation. The bacterium comprises psoralen-nucleic acid adducts that

attenuate the bacterium for proliferation. The bacterium further comprises a genetic mutation that ~~attenuates~~ the ability of the bacterium to repair its modified nucleic acid. The bacterium comprises ~~inactivating~~ mutations in actA, iniB, uvrA and uvrB; and where the bacterium has been ~~attenuated~~ for proliferation by psoralen-nucleic acid cross-links. Preferred Composition: The composition further comprises a therapeutic agent. Preferred Method: In the method of inducing an ~~immune~~ response in a host to a non-Listerial antigen, or enhancing the ~~immunogenicity~~ of a non-Listerial antigen, or preventing or treating a non-Listerial infectious or cancerous condition. The ~~immune~~ response comprises an innate ~~immune~~ response or an adaptive ~~immune~~ response. The recombinant Listeria bacterium is administered with an adjuvant and/or a costimulatory molecule. The recombinant Listeria bacterium is administered in combination with a therapeutic agent. Administration of the recombinant Listeria bacterium is repeated. A second administration of the recombinant Listeria bacterium is repeated after two weeks following a first administration of the Listeria bacterium. Administration of the recombinant Listeria bacterium is followed by administration of a vaccine that does not contain live, metabolically active Listeria and that encodes the non-Listerial antigen. In the method for enhancing an ~~immune~~ response in a mammal to a non-Listerial antigen, the ~~immunogenicity~~ to the antigen is enhanced relative to ~~immunogenicity~~ of the antigen induced by a recombinant Listeria bacterium comprising the polynucleotide encoding the heterologous polypeptide, where expression of the polynucleotide encoding the heterologous polypeptide is controlled by a wild-type PrfA polypeptide. The enhanced ~~immunogenicity~~ comprises increased expression of one or any combination of monocyte chemoattractant protein 1 (MCP-1), interleukin (IL)-6, interferon (IFN)- gamma , TNF- alpha or IL-12p70. The host is a human. Preparation (claimed): Preparing a recombinant Listeria bacterium comprises stably introducing a recombinant polynucleotide encoding a heterologous polypeptide into a Listeria bacterium, where the Listeria bacterium comprises a polynucleotide encoding a PrfA~~asterisk~~ mutant polypeptide; and where the heterologous polypeptide is non-bacterial; and where following introduction into the Listeria bacterium the recombinant polynucleotide encoding the heterologous polypeptide is operably linked to a PrfA responsive regulatory element. The recombinant polynucleotide comprises the PrfA-responsive regulatory element operably linked to the heterologous polypeptide. The recombinant polynucleotide encodes a fusion protein comprising a signal polypeptide and the heterologous polypeptide. The recombinant polynucleotide encoding the heterologous polypeptide is integrated into the Listeria chromosome, where the recombinant polynucleotide encoding the heterologous polypeptide is integrated into a transfer RNA (tRNA) gene of the Listeria chromosome. The signal polypeptide is an ActA signal polypeptide, and where, the recombinant polynucleotide encoding a heterologous polypeptide is introduced into the actA gene of the Listeria. Preparing a recombinant Listeria bacterium where (a) a recombinant polynucleotide encoding a PrfA~~asterisk~~ mutant polypeptide, and (b) a recombinant polynucleotide encoding a heterologous polypeptide, are stably introduced into a Listeria bacterium, where the Listeria bacterium comprises a nonfunctional prfA allele, and where following introduction of the recombinant polynucleotide encoding the heterologous polypeptide the nucleic acid is operably linked to a PrfA responsive regulatory element.

L59 ANSWER 22 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2009-L22139 [200948] WPIX
 TITLE: Producing attenuated Vesicular Stomatitis Virus (VSV) in
 a cell culture by infecting the cells expressing VSV G
 protein with an attenuated VSV, growing the infected

cells in culture, and recovering the attenuated VSV from the culture

DERWENT CLASS: B04; D16

INVENTOR: HENDRY R M; JOHNSON J E; PARKS C L; SIDHU M K; WITKO S E; HENDRY R; PARKS C; SIDHU M; WITKO S

PATENT ASSIGNEE: (AMHP-C) WYETH; (AMHP-C) WYETH LLC

COUNTRY COUNT: 123

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2009085178	A1	20090709	(200948)*	EN	62	[9]
US 20090175900	A1	20090709	(200948)	EN		
AU 2008343925	A1	20090709	(201050)	EN		
EP 2225368	A1	20100908	(201059)	EN		
CA 2710356	A1	20090709	(201068)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2009085178	A1	WO 2008-US13834	20081218
US 20090175900	A1 Provisional	US 2007-15375P	20071220
US 20090175900	A1	US 2008-335763	20081216
AU 2008343925	A1	AU 2008-343925	20081218
EP 2225368	A1	EP 2008-868608	20081218
EP 2225368	A1 PCT Application	WO 2008-US13834	20081218
CA 2710356	A1	CA 2008-2710356	20081218
CA 2710356	A1 PCT Application	WO 2008-US13834	20081218
CA 2710356	A1 PCT Nat. Entry	CA 2008-2710356	20100621

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2008343925	A1 Based on	WO 2009085178 A
EP 2225368	A1 Based on	WO 2009085178 A
CA 2710356	A1 Based on	WO 2009085178 A

PRIORITY APPLN. INFO: US 2007-15375P 20071220

US 2007-15375 20071220

US 2008-335763 20081216

TECH

BIOTECHNOLOGY - Preferred Method: In producing ~~attenuated~~ VSV in a cell culture, the ~~attenuated~~ VSV is a propagation-defective VSV. Infecting comprises co-culturing the cells expressing the VSV G protein with cells transfected with: (a) a viral cDNA expression vector comprising a polynucleotide encoding a genome or antigenome of the ~~attenuated~~ VSV; (b) one or more support plasmids encoding a nucleocapsid (N), phosphoprotein (P), large protein (L), and glycoprotein (G) protein of VSV; and (c) a plasmid encoding a DNA-dependent RNA polymerase. The cells are further transfected with a support plasmid encoding an M protein of VSV. The cells are transfected via electroporation. The viral genome-length RNA is transcribed from the polynucleotide encoding the genome or antigenome of the ~~attenuated~~ VSV. The DNA-dependent RNA polymerase is T7 RNA polymerase and where the viral cDNA expression vector and the support plasmids are under the control of a T7 promoter. The VSV G protein encoded by the support plasmid is encoded by an optimized or a non-optimized VSV G gene. The expression of VSV G protein from the

optimized VSV G gene is under the control of a cytomegalovirus-derived RNA polymerase II promoter. It is also under the control of a transcriptional unit recognized by RNA polymerase II producing a functional mRNA. The optimized VSV G gene is derived from an Indiana serotype or New Jersey serotype. The optimized VSV G gene is selected from any of fully defined 1561-1580 bp sequences (SEQ ID NO. 3, 4, or 5) given in the specification. The polynucleotide is operatively linked to a transcription terminator sequence. The polynucleotide is operatively linked to a ribozyme sequence. The ~~attenuated~~ VSV encodes a heterologous antigen, where the heterologous antigen is from a pathogen selected from measles virus, subgroup A and subgroup B respiratory syncytial viruses, human parainfluenza viruses, mumps virus, human papilloma viruses of type 1 or type 2, human ~~immunodeficiency~~ viruses, herpes simplex viruses, cytomegalovirus, rabies virus, human metapneumovirus, Epstein Barr virus, filoviruses, bunyaviruses, flaviviruses, alphaviruses, influenza viruses, hepatitis C virus, or *Chlamydia trachomatis*. The ~~attenuated~~ VSV further encodes a non-viral molecule selected from a cytokine, a T-helper epitope, a restriction site marker, or a protein of a microbial pathogen or parasite capable of eliciting an ~~immune response~~ in a mammalian host. The cells are qualified production cells. The cells are Vero cells. The ~~attenuated~~ VSV lacks a VSV G protein (VSV- Delta G). The yield of ~~attenuated~~ VSV is greater than 1x10⁶ IU per ml of culture. The ~~attenuated~~ VSV expresses a G protein having a truncated extracellular domain (VSV-Gstem). It also expresses a G protein having a truncated cytoplasmic tail (CT) region. The ~~attenuated~~ VSV further expresses a G protein having a cytoplasmic tail region truncated to one amino acid (G-CT1) or expresses a G protein having a cytoplasmic tail region truncated to nine amino acids (G-CT9). The ~~attenuated~~ VSV comprises the N gene which has been translocated downstream from its wild-type position in the viral genome, thus resulting in a reduction in N protein expression. The ~~attenuated~~ VSV contains non-cytopathic M gene mutations (Mncp), where the mutations reduce the expression of two overlapping in-frame polypeptides that are expressed from the M protein mRNA by initiation of protein synthesis at internal AUGs, affecting interferon (IFN) induction, affecting nuclear transport, or its combinations. Alternatively, producing ~~attenuated~~ VSV in a cell culture comprises: (a) transfecting cells with: (i) a viral cDNA expression vector comprising a polynucleotide encoding a genome or antigenome of the ~~attenuated~~ VSV; (ii) one or more support plasmids encoding N, P, L and G proteins of VSV; and (iii) a plasmid encoding a DNA- dependent RNA polymerase; (b) growing the transfected cells in culture; (c) rescuing the ~~attenuated~~ VSV from the culture; (d) infecting cells expressing VSV G protein encoded by an optimized VSV G gene with the rescued ~~attenuated~~ VSV; (e) growing the infected cells in culture; and (f) recovering the ~~attenuated~~ VSV from the culture of infected cells. Preferred Composition: The composition further comprises one or more support vectors that encode VSV proteins selected from: (a) an N protein; (b) a P protein; (c) an L protein; (d) an M protein; or (e) a G protein. Preferred Kit: The kit further comprises: (a) a viral cDNA expression vector comprising a polynucleotide encoding a genome or antigenome of an ~~attenuated~~ VSV; and (b) a vector that encodes a DNA-dependent RNA polymerase. It further comprises one or more support vectors that encode VSV proteins selected from: (a) an N protein; (b) a P protein; (c) an L protein; (d) an M protein; or (e) a G protein.

L59 ANSWER 23 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2009-R87055 [200982] WPIX
 TITLE: Changing load state of major histocompatibility complex molecules for treating e.g. cancer, comprises providing composition comprising major histocompatibility complex molecules, adding optionally modified dipeptide and

isolating
 DERWENT CLASS: A96; B04; C06; D16; D22; S03
 INVENTOR: FALK K; JUNG G; KUEHNE R; ROETZSCHKE O
 PATENT ASSIGNEE: (DELB-N) DELBRUECK-CENT MAX; (LEIB-N) LEIBNITZ-INST
 MOLEKULARE PHARMAKOLOGIE
 COUNTRY COUNT: 38

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 2127664	A1	20091202	(200982)*	EN	55	[7]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 2127664	A1	EP 2008-2845	20080215

PRIORITY APPLN. INFO: EP 2008-2845 20080215
 USE

USE - Used for changing the load state of MHC molecules, where the load of MHC molecules on antigen-presenting cells (APCs) (endogenous or non-endogenous matured and non-matured dendritic cells, B-cells or macrophages or other antigen-presenting cells) is changed to modify immune responses (tumor-specific, pathogen-specific or autoreactive immune responses). The MHC molecule is used for preparation of a composition for triggering tumor-specific, pathogen-specific or autoreactive immune responses and for treating cancer, hepatitis B-induced tumors (hepatocell carcinomas), HTLV-1- and HTLV-2-induced lymphomas, acoustic neuroma, cervical cancer, lung cancer, pharyngeal cancer, anal carcinoma, glioblastoma, lymphomas, rectal carcinoma, astrocytoma, brain tumors, stomach cancer, retinoblastoma, basalioma, brain metastases, medulloblastomas, vaginal cancer, pancreatic cancer, testicular cancer, melanoma, thyroidal carcinoma, bladder cancer, Hodgkin's syndrome, meningiomas, Schneiberger disease, bronchial carcinoma, hypophysis tumor, mycosis fungoides, oesophageal cancer, breast cancer, carcinoids, neurinoma, spinalioma, laryngeal cancer, renal cancer, thymoma, corpus carcinoma, bone cancer, non-Hodgkin's lymphomas, urethral cancer, CUP syndrome, head/neck tumors, oligodendroglioma, vulval cancer, intestinal cancer, colon carcinoma, oesophageal carcinoma, wart involvement, tumors of the small intestine, craniopharyngeomas, ovarian carcinoma, abdomen tumors, ovarian cancer, liver cancer, pancreatic carcinoma, cervical carcinoma, endometrial carcinoma, liver metastases, penile cancer, tongue cancer, gall bladder cancer, plasmocytoma, uterine cancer, lid tumor or prostate cancer), infectious diseases (influenza, malaria, severe acute respiratory syndrome, yellow fever, AIDS, Lyme borreliosis, Leishmaniasis, anthrax, viral infectious diseases such as AIDS, Condyloma acuminata, hollow warts, dengue fever, three-day fever, Ebola virus, cold, early summer meningoencephalitis, flu, shingles, hepatitis, herpes simplex type I, herpes simplex type II, Herpes zoster, Japanese encephalitis, Lassa fever, Marburg virus, measles, foot-and-mouth disease, mononucleosis, mumps, Norwalk virus infection, Pfeiffer's glandular fever, smallpox, polio (childhood lameness), pseudo-croup, fifth disease, rabies, warts, West Nile fever, chickenpox, cytomegalic virus, bacterial infectious diseases comprising abort (prostate inflammation), anthrax, appendicitis, borreliasis, botulism, Camphylobacter, Chlamydia trachomatis (inflammation of the urethra, conjunctivitis), cholera, diphtheria, donavanosis, epiglottitis, typhus fever, gas gangrene, gonorrhoea, rabbit fever, Helicobacter pylori, whooping cough, climatic

bubo, osteomyelitis, Legionnaire's disease, leprosy, listeriosis, pneumonia, meningitis, bacterial meningitis, otitis media, Mycoplasma hominis, neonatal sepsis (Chorioamnionitis), noma, paratyphus, plague, Reiter's syndrome, Rocky Mountain spotted fever, Salmonella paratyphus, Salmonella typhus, scarlet fever, syphilis, tetanus, tripper, tsutsugamushi disease, tuberculosis, typhus, vaginitis (colpitis), soft chancre, infectious diseases caused by parasites, protozoa or fungi, comprising amoebiasis, bilharziosis, Chagas disease, Echinococcus, fish tapeworm, fish poisoning (Ciguatera), fox tapeworm, athlete's foot, canine tapeworm, candidosis, yeast fungus spots, scabies, cutaneous Leishmaniosis, lamblasis (giardiasis), lice, microscopy, onchocercosis (river blindness), fungal diseases, bovine tapeworm, schistosomiasis, porcine tapeworm, toxoplasmosis, trichomoniasis, trypanosomiasis (sleeping sickness), visceral Leishmaniosis, nappy dermatitis or miniature tapeworm) or ~~autoimmune~~ diseases (multiple sclerosis, rheumatoid arthritis, diabetes, type I diabetes, systemic lupus erythematosus, chronic polyarthritis, Basedow's disease, ~~autoimmune~~ forms of chronic hepatitis, Colitis ulcerosa, type I allergic disorders, type II allergic disorders, type III allergic disorders, type IV allergic disorders, fibromyalgia, hair loss, Bechterew's disease, Crohn's disease, Myasthenia gravis, neurodermitis, Polymyalgia rheumatica, progressive systemic sclerosis, psoriasis, psoriasis or vasculitis, or further ~~autoimmune~~ disorders of type I, type II, type III or type IV); for ~~attenuating~~ aggressive ~~immune~~ reactions (all claimed). The dipeptide is used for diagnosis of cancer, infectious diseases or ~~autoimmune~~ diseases. Test details are described but no results given.

L59 ANSWER 24 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2008-K18363 [200860] WPIX
 DOC. NO. CPI: C2008-280207 [200860]
 TITLE: Cellular vaccine for treating HIV comprises receptor CD4 containing T cells modified to contain antigenic component or nucleic acid molecule encoding it, which are activated or can be activated; and are apoptotic or can be made apoptotic
 DERWENT CLASS: B04; D16
 INVENTOR: ANDERSSON J; JOHANSSON U; SPETZ-HOLMGREN A; WALTHER-JALLOW L
 PATENT ASSIGNEE: (AVAR-N) AVARIS AB; (ANDE-I) ANDERSSON J; (JOHA-I) JOHANSSON U; (SPET-I) SPETZ-HOLMGREN A; (WALT-I) WALTHER-JALLOW L
 COUNTRY COUNT: 121
 PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2008056174	A2	20080515	(200860)*	EN	215[29]	
WO 2008056174	A3	20080703	(200860)	EN		
EP 2089054	A2	20090819	(200955)	EN		
US 20100040589	A1	20100218	(201014)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2008056174	A2	WO 2007-GB4303	20071112
EP 2089054	A2	EP 2007-824532	20071112
EP 2089054	A2 PCT Application	WO 2007-GB4303	20071112
US 20100040589	A1 PCT Application	WO 2007-GB4303	20071112

US 20100040589 A1

US 2009-514233 20091001

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 2089054 A2	Based on	WO 2008056174 A

PRIORITY APPLN. INFO: GB 2006-22399 20061110

ADV ADVANTAGE - The vaccine provides improved cellular vaccine that is autologous or allogenic vaccine. The cellular vaccine comprising or consisting of apoptotic CD4+ T cells is capable of providing a prophylactic and/or therapeutic treatment effect against a pathological condition; by providing active immunization in a host against the pathological condition, and further by providing an activation/maturation signal to immature antigen-presenting cells, which enables effective antigen presentation after uptake and processing of antigen, and leads to induction of immune responses. The composition is efficacious for immunization against the HIV infection.

TECH

BIOTECHNOLOGY - Preferred Composition: The vaccine (V1) further comprises a population of antigen-presenting cells. The pharmaceutical composition (C1) further comprises an adjuvant (preferably granulocyte-macrophage-colony stimulating factor (GM-CSF)) and does not comprise a separate adjuvant. The adjuvant composition (C2) comprises or consists of CD4+ T cells and/or CD8+ T cells; and the peripheral blood mononuclear cells (PBMCs) (preferably preferentially or predominantly CD4+ T cells or CD8+ T cells (50 to greater than or equal to 99%)), in which the T cells are further modified such that they contain the antigenic component, and/or nucleic acid molecule encoding the antigenic component; and further comprises a population of antigen-presenting cells. The adjuvant composition (C2) is for use with a vaccine against the pathogenic condition caused by HIV, tuberculosis, malaria, influenza or cancer; and the vaccine comprises or consists of an attenuated or original viral vector selected from adenoviruses (such as adenoviruses 1, 2 and 5, chimpanzee), hepatitis viruses (such as hepatitis B virus, and hepatitis C virus), Pox viruses (such as canarypox, vaccinia), rabies virus, murine leukemia virus, alpha replicons, measles, rubella, polio, calicivirus, paramyxovirus, vesicular stomatitis virus, papilloma, leporipox, parvovirus, papovavirus, togavirus, picornavirus, reovirus, or ortomyxovirus (such as influenza viruses); or a bacterial vector selected from mycobacteria, Salmonella, Listeria, Treponema pallidum, Neisseria gonorrhoeae, Chlamydia trachomatis, or Hemophilus ducreyi. The compositions (C2) and (C5) are frozen. The combination product (C4) is present in the form of a kit comprising the pharmaceutical composition (C3), and a vaccine; each provided in a form that is suitable for administration in conjunction with the other. The combination product (C6) is present in the form of a kit comprising the composition (C5), and the population of antigen-presenting cells; each provided in a form that is suitable for administration in conjunction with the other. The composition (C6') further comprises at least one chemokine/cytokine with anti-viral activity. Preferred Method: The CD4+ T cells are obtained by: (a1) isolating/deriving/purifying the CD4+ T cells from primary lymphocytes from a subject in which the cellular vaccine is to be used, or from a same species as that of the subject in which the cellular vaccine is to be used; (b1) activating a population of CD4+ T cells; (c1) modifying the population of cells, such that they contain an antigenic component comprising a microorganism or its antigenic component, or an antigenic component of a cancer cell, or a nucleic acid molecule encoding the antigenic component; and (d1) inducing the population of CD4+ T cells to

undergo apoptosis, and further (e1) culturing the population of CD4+ T cells in a medium; and (f1) freezing the population of CD4+ T cells. The steps (b1)-(f1) can be performed in any order. The T cells are modified with the antigenic component and/or nucleic acid molecule encoding the antigenic component, such that they contain a microorganism selected from bacteria, mycoplasmas, protozoa, yeasts, prions, archaea, fungi, or viruses (preferably virus, bacterium, or protozoan), its antigenic component, or a nucleic acid molecule encoding them; or an antigenic component of a cancer cell, or a nucleic acid molecule encoding the antigenic component. The method (M1) involves: steps (a1), (c1), (b1), (e1), (f1), (d1), and further (g1) adding a population of antigen-presenting cells to the cellular vaccine (preferably (i) isolating PBMCs from a blood sample from a patient to be treated; (ii) enriching the isolated PBMCs for CD4+ cells (such as the CD8+ cells are depleted from the PBMCs); (iii) culturing the CD4+ cell-enriched cells in vitro; activating the cells (such as with anti-CD8 and anti-CD28 monoclonal antibodies (mAbs) in the presence of interleukin-2 (IL-2)); (iv) collecting the supernatant to provide an HIV virus stock from the patient; stored freezing the obtained virus stock; (v) repeating the steps (i) and (ii) to prepare the cells to be used as immunogens; (vi) culturing the cells obtained in vitro; (vii) activating the cells (with anti-CD8 and anti-CD28 mAbs in the presence of IL-2); (viii) incubating the activated CD8- PBMCs with autologous virus, from the stock obtained in the step (vi), to obtain infected cells; (ix) on the day of immunization of the patient, thawing the infected cells (if frozen), washing and exposing to an apoptosis-inducing agent (preferably gamma-irradiation); and (x) keeping the cells in room temperature after apoptosis induction and using for the immunization (such as within 2 hours)). The T cells of the adjuvant composition (C2) are isolated/derived from the primary lymphocytes same as in the step (a1). The method (M2) for making the adjuvant composition (C2), or the composition (C5) having microbicide activity, involves: obtaining a population of T cells that are activated, or can be activated; and are apoptotic or can be made apoptotic. The method (M2') for making a composition having microbicide activity (C6') involves: contacting a population of activated, apoptotic T cells with a population of antigen-presenting cells in a cell medium in vitro; and then obtaining cell medium from it. The method (M3) for enhancing the effect of a vaccine involves: administering the adjuvant composition (C2), the pharmaceutical composition (C2), or the combination product (C4). The method (M4) for activating antigen-presenting cells involves: contacting the antigen-presenting cells with the adjuvant composition (C2), the pharmaceutical composition (C3), or the combination product (C4). The method (M5) for treatment of a pathological condition involves: administering the cellular vaccine (V1); the pharmaceutical composition (C1), (C3), or (C5); a vaccine and the adjuvant composition (C2); or the combination product (C4) or (C6). The T cells of the composition (C5) are additionally obtained or derived from an immortalized cell line. The method (M2) further involves steps (e1)-(g1). In the method (M5), the T cells are exposed to an apoptosis-inducing agent, immediately prior to administration to the subject. The T cells are modified by a method selected from transfection with a nucleic acid molecule encoding the antigen component (preferably microbial genes of HIV, hepatitis B and C virus, cytomegalovirus (CMV), Epstein-Barr virus (EBV), influenza virus, or Mycobacterium tuberculosis genes) using nanoparticles; infection with a virus selected from viruses within the herpes virus family (such as EBV), or retroviruses (such as HIV (preferably HIV-1, or HIV-2)); or fusion. Preferred Cells: The antigen-presenting cells are macrophages, or dendritic cells. The cells are frozen. Preferred Components: The T cells are activated or can be activated, by exposure to an activating agent selected from lectins (preferably phytohemagglutinin (PHA), or

concanavalin A (ConA)); chemicals or agents that induce Ca²⁺ influx in the T cells (preferably ionomycin); alloantigens, superantigens (preferably Staphylococcal enterotoxin A (SEA), or Staphylococcal enterotoxin B (SEB)); monoclonal antibodies (preferably anti-CD3, anti-CD28, or anti-CD49d); cytokines (preferably IL-1, or tumor necrosis factor- alpha (TNF- alpha)), chemokine and chemokine receptors; or molecules capable of interfering with T cell surface receptors or their signal transducing molecules (preferably PHA; anti-CD3 antibody, either alone or in combination with anti-CD28 antibody; or anti-CD49d antibody). The T cells are apoptotic, or can be made apoptotic, by exposure to an apoptosis-inducing agent selected from gamma-irradiation, cytostatic drugs, UV-irradiation, mitomycin C, starvation (such as serum deprivation), Fas ligation, cytokines and activators of cell death receptors, growth factors and their signal transducing molecules, interference with cyclins, over-expression of oncogenes, molecules interfering with anti-apoptotic molecules, interference of the membrane potential of the mitochondria, or steroids (preferably gamma-irradiation).

L59 ANSWER 25 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2008-F86813 [200837] WPIX
 DOC. NO. CPI: C2008-189448 [200837]
 DOC. NO. NON-CPI: N2008-458885 [200837]
 TITLE: Immunological monitoring comprises incubating a sample obtained from a mammal with at least one test S antigen, determining the CCL8 level in the sample, and comparing the determined CCL8 level with a reference-level
 DERWENT CLASS: B04; D16; S03
 INVENTOR: EUGEN-OLSEN J; RAVN P; RUHWALD M
 PATENT ASSIGNEE: (HVID-N) HVIDOVRE HOSPITAL
 COUNTRY COUNT: 120

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2008052566	A1	20080508	(200837)*	EN	106	[6]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2008052566	A1	WO 2007-DK50159	20071101

PRIORITY APPLN. INFO: DK 2006-1419 20061102
 TECH

BIOTECHNOLOGY - Preferred Method: In the immunological method above, the sample is divided into at least 2 fractions, the method comprises: (a) incubating the first fraction of the sample with at least one test-antigen to generate a response sample; (b) incubating the second fraction of the sample with an inactive solution to generate a nil sample; (c) determining the CCL8 level in the two fractions; (d) determining the antigen-dependent CCL8 response of the sample by subtracting the CCL8 level determined in the nil sample from the CCL8 determined in the response sample; and (e) comparing the antigen-dependent CCL8 response or a value derived from it with a reference-level or a value derived from it, thus determining whether the mammal has previously encountered the test-antigen by generating an immunological reactivity to the test-antigen or whether the mammal has previously encountered other antigens generating immunological cross reactivity to the test-antigen. The sample is divided into 3 fractions and incubating the third fraction

of the sample with a mitogen to generate a positive control. The antigen-dependent response is corrected for the immune responsiveness of the mammal. An antigen-dependent CCL8 response above the reference-level and a nil sample above or below a nil reference-level indicate that the mammal has an active infection, a latent infection, a recent infection, and/or a long term latent infection. The antigen-dependent CCL8 response above the reference-level indicate that the mammal has previously encountered the test-antigen or that the mammal has previously encountered other antigens generating cross reactivity to the test-antigen because of an infection. The antigen-dependent CCL8 response above the reference-level indicate that the mammal has previously encountered the test-antigen or that the mammal has previously encountered other antigens generating cross reactivity to the test antigen because of vaccination. The infection is or was caused by a microorganism selected from Mycobacterium, Leishmania, Chlamydia, Trypanosoma, or Schistosoma. The Mycobacterium belongs to M. tuberculosis complex organisms (M. tuberculosis, M. bovis, and M. africanum), and Mycobacterium where the region of difference (RD1) has not been deleted (a M. kansasii, M. szulgai, M. marinum, M. flavescens, M. gastrii) or Mycobacterium pathogenic to humans (M. avium, M. leprae, or other non-tuberculous mycobacterium). The test-antigen is selected from early secreted antigenic target 6 (ESAT-6), culture filtrate protein 10 (CFP-10), TB7.7, Ag85, or other RD-1 antigens. Chlamydia is selected from C. trachomatis, C. pneumonia, C. psittaci, C. muridarum, or C. suis. The test-antigen is selected from Serovar D extract, Serovar D lysate, major outer membrane protein (MOMP), cysteine-rich outer membrane proteins (OMPs), OMP2, OMP3, Polymorphic OMPs (POMP5), adenosine diphosphate/adenosine triphosphate translocase of Chlamydia pneumonia, porin B proteins (PorBs), or CT521. In the method, the sample is derived from blood. The method further comprises: (a) determining the level of IP-10, MCP-1, interleukin (IL)-1RA, IL-2, interferon (INF)-gamma, IL-10, sCD40L, and/or MIG in response to the test S antigen; (b) combining the determined level of IP-10, MCP-1, IL-1RA, IL-2, INF-gamma, IL-10, sCD40L, and/or MIG; and (c) comparing the combined level with a combined reference-level.

L59 ANSWER 26 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2007-778126 [200772] WPIX
 TITLE: Use of a transfection reagent as an adjuvant, useful in preparing a composition for eliciting an immune response
 DERWENT CLASS: A96; B04; C06; D16
 INVENTOR: SATTENTAU Q; SHEPPARD N
 PATENT ASSIGNEE: (UYOX-C) ISIS INNOVATION LTD
 COUNTRY COUNT: 119

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2007107739	A1	20070927	(200772)*	EN	59[7]	
EP 2007422	A1	20081231	(200904)	EN		
US 20090297551	A1	20091203	(200979)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2007107739	A1	WO 2007-GB979	20070319
EP 2007422	A1	EP 2007-732071	20070319
EP 2007422	A1 PCT Application	WO 2007-GB979	20070319
US 20090297551	A1 PCT Application	WO 2007-GB979	20070319

US 20090297551 A1

US 2009-293380 20090409

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 2007422 A1	Based on	WO 2007107739 A

PRIORITY APPLN. INFO: GB 2006-5521 20060318

TI Use of a transfection reagent as an adjuvant, useful in preparing a composition for eliciting an immune response

TT TT: TRANSFECTED REAGENT ADJUVANT USEFUL PREPARATION COMPOSITION ELICIT IMMUNE RESPOND

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are:

- (1) an adjuvant composition comprising a transfection reagent;
- (2) an immunogenic composition, capable of eliciting an immune response to an antigen when administered to a human or non-human animal, comprising one or more antigens and an adjuvant composition;
- (3) a vaccine composition comprising one or more antigens and an adjuvant composition;
- (4) an anti-viral and/or an anti-cancer and/or an immuno-modulating composition comprising an adjuvant of (1);
- (5) a pharmaceutical composition comprising an adjuvant or composition, and one or more physiological carriers, diluents, excipients or auxiliaries; and
- (6) a method for inducing or enhancing immunogenicity of an antigen in a human or non-human animal subject to be treated.

USE

USE - The transfection reagent is used as an adjuvant. The immunogenic composition is used as a vaccine. The adjuvant composition or immunogenic composition is useful in therapeutic or prophylactic treatments or both. The adjuvant composition is useful in preparing a composition for eliciting an immune response, where the composition for eliciting an immune response is a vaccine, where the composition also comprises one or more antigens, and where the composition does not comprise a ligand for one or more intracellular immune response receptors (all claimed).

TECH

BIOTECHNOLOGY - Preferred Adjuvant Composition: The transfection reagent is non-liposomal, where the non-liposomal transfection reagent is a cationic polymer. The transfection reagent is PEI or an effective derivative of PEI. The adjuvant stimulates an immune response selected from a Th1 immune response, a Th2 immune response and a combination of a Th1 and a Th2 immune response, when administered to a human or non-human animal. The adjuvant comprises one or more ligands for one or more intracellular immune response receptors. The adjuvant does not comprise a ligand for one or more intracellular immune response receptors. Preferred Immunogenic or Vaccine Composition: The antigen is a nucleic acid, protein, peptide, glycoprotein, polysaccharide, carbohydrate, fusion protein, lipid, glycolipid, peptide mimic of a polysaccharide, cell, cell extract, dead or its attenuated cell or extract, tumor cell or its extract, or a viral particle or its extract, or their combination. The antigen is derived from a human or non-human animal, bacterium, virus, fungus, protozoan or prion. The antigen is derived from a pathogen, where the antigen is a protein or polypeptide derived from one or more of the following pathogens, HIV type 1, HIV type 2, the Human T Cell Leukemia Virus type 1, the Human T Cell Leukemia Virus type 2, the Herpes Simplex Virus type 1, the Herpes Simplex Virus type 2, the human papillomavirus, Treponema pallidum, Neisseria gonorrhoeae, Chlamydia trachomatis and Candida albicans. The antigen is an HIV

envelope glycoprotein (Env), or its fragment or immunogenic derivative, where the antigen has at least 65% identity to the sequence of Sequence ID no: 2 or 4. Preferred Method: Inducing or enhancing immunogenicity of an antigen in a human or non-human animal subject to be treated comprises administering to the subject one or more antigens and an adjuvant composition in an amount to induce or enhance the immunogenicity of the antigen in the subject. The adjuvant and antigen are administered simultaneously, sequentially or separately. The immune reaction produced is sufficient to vaccinate a subject against a pathogen from which the antigen is derived.

L59 ANSWER 27 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2007-123459 [200712] WPIX
 DOC. NO. CPI: C2007-045816 [200712]
 TITLE: New chimeric immunogen for inducing immune response for Chlamydia trachomatis comprises receptor binding domain, translocation domain, and Chlamydia trachomatis antigen comprising a specified amino acid sequence
 DERWENT CLASS: B04; D16
 INVENTOR: DEAN D; MRSNY R J; MRSNY R
 PATENT ASSIGNEE: (CHIL-N) CHILDRENS HOSPITAL & RES CENT AT OAKLAND; (TRIN-N) TRINITY BIOSYSTEMS INC; (CHIL-N) CHILDRENS HOSPITAL&RES CENT AT OAKLAND
 COUNTRY COUNT: 112
 PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2006125076	A2	20061123	(200712)*	EN	129	[13]
AU 2006247188	A1	20061123	(200812)	EN		
EP 1885393	A2	20080213	(200813)	EN		
CA 2609038	A1	20061123	(200864)	EN		
WO 2006125076	A8	20081218	(200902)	EN		
US 20090214570	A1	20090827	(200957)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2006125076	A2	WO 2006-US19232	20060517
AU 2006247188	A1	AU 2006-247188	20060517
CA 2609038	A1	CA 2006-2609038	20060517
EP 1885393	A2	EP 2006-760091	20060517
EP 1885393	A2 PCT Application	WO 2006-US19232	20060517
CA 2609038	A1 PCT Application	WO 2006-US19232	20060517
CA 2609038	A1 PCT Nat. Entry	CA 2006-2609038	20071119
US 20090214570	A1 Provisional	US 2005-682616P	20050518
US 20090214570	A1 PCT Application	WO 2006-US19232	20060517
US 20090214570	A1	US 2008-914734	20080808

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2006247188	A1 Based on	WO 2006125076 A
EP 1885393	A2 Based on	WO 2006125076 A
CA 2609038	A1 Based on	WO 2006125076 A

PRIORITY APPLN. INFO: US 2005-682616P 20050518

US 2005-682616P 20050518
US 2008-914734 20080808

TI New chimeric ~~immunogen~~ for inducing ~~immune response~~ for Chlamydia trachomatis comprises receptor binding domain, translocation domain, and Chlamydia trachomatis antigen comprising a specified amino acid sequence
TT TT: NEW CHIMERIC IMMUNOGENIC INDUCE IMMUNE RESPOND CHLAMYDIA
TRACHOMATIS COMPRISE RECEPTOR BIND DOMAIN ANTIGEN SPECIFIED AMINO ACID SEQUENCE

DETD DETAILED DESCRIPTION - A new chimeric immunogen (A1), (A2) or (A3) comprises: a receptor binding domain, a translocation domain, and a Chlamydia trachomatis antigen (A'1), (A'2) or (A'3) comprising an amino acid sequence (S1), (S2) or (S3), of formula (Ia)-(Ic), and the defined amino acid sequence of (SEQ ID No: 42), (SEQ ID No: 2) and (SEQ ID No: 3), given in the specification, respectively.

Xaa1-Xaa2-Xaa3-Xaa4-Xaa5-Xaa6-Xaa7-Xaa8-Xaa9-Xaa10-Xaa11-Xaa12-Xaa13-Xaa14-Xaa15-Xaa16-Xaa17-Xaa18-Xaa19-Xaa20-Xaa21-Xaa22-Xaa23-Xaa24-Xaa25-Xaa26-Xaa27 (Ia)

Xaa1a-Xaa2a Xaa3a-Xaa4a-Xaa5a-Xaa6a (Ib)

Xaa1b-Xaa2b-Xaa3b-Xaa4b-Xaa5b-Xaa6b-Xaa7b-Xaa8b-Xaa9b-Xaa10b-Xaa11b-Xaa12b-Xaa13b-Xaa14b-Xaa15b-Xaa16b-Xaa17b-Xaa18b-Xaa19b-Xaa20b-Xaa21b-Xaa22b-Xaa23b (Ic)

Xaa1=Ala, Val or absent;

Xaa2=Glu, Thr, Lys or absent;

Xaa3=Ala, Thr, Pro or absent;

Xaa4=Ile, Val or absent;

Xaa5=Phe, Leu, Val or absent;

Xaa6=Asp or absent;

Xaa7=Val, Thr, Ile or absent;

Xaa8=Thr;

Xaa9=Thr;

Xaa10=Leu;

Xaa11=Asn;

Xaa12=Pro or Arg;

Xaa13=Thr;

Xaa14=Thr or Ile;

Xaa15=Ala or Thr;

Xaa16=Gly;

Xaa17=Ala, Cys, Lys or absent;

Xaa18=Gly or absent;

Xaa19=Ser, Gly, Thr, Ala, Glu, Asp or absent;

Xaa20=Val or absent;

Xaa21=Ala, Val, Ile, Lys or absent;

Xaa22=Ala, Gly, Ser, Thr or absent;

Xaa23=Ala, Gly, Asn, Ser or absent;

Xaa24=Gly, Asn or absent;

Xaa25=Ala, Ser, Thr or absent;

Xaa26=Asp, Glu or absent;

Xaa27=Gly, Asn or absent;

Xaa1a=Ala or Ser;

Xaa2a=Gly;

Xaa3a=Thr;

Xaa4a=Asp or Glu;

Xaa5a=Ala or Gly;

Xaa6a=Ala or Val;

Xaa1b=Gly;

Xaa2b=Ala, Asp or Glu;

Xaa3b=Ala, Glu or Lys;

Xaa4b=Leu or Pro;

Xaa5b=Ala or Thr;

Xaa6b=Ala, Gly, Ser, Thr or Val;

Xaa7b=Lys, Asn, Arg, Ser or absent;
 Xaa8b=Ala, Asp or absent;
 Xaa9b=Ala, Asp, Ile, Ser, Thr or Val;
 Xaa10b=Ala, Glu, Gly, Thr or Val;
 Xaa11b=Asp, Gly or Asn;
 Xaa12=Leu, Asn or Thr;
 Xaa13b=Ala, Glu, Gln, Ser or Thr;
 Xaa14b=Ala, Lys, Asn, Ser or Thr;
 Xaa15b=Ala, Asp or Thr;
 Xaa16b=Leu or Pro;
 Xaa17b=Lys, Ser, Thr or Val;
 Xaa28b=Ile, Lys, Thr or Val;
 Xaa19b=Cys, Leu or Asn;
 Xaa20b=Ile, Thr or Val;
 Xaa21b=Ala or Glu;
 Xaa22b=Ar;
 Xaa23b=Glu, Pro or Thr.

INDEPENDENT CLAIMS are included for:

- (1) a chimeric immunogen (A4), comprising a receptor binding domain, a translocation domain, and a C. trachomatis antigen (A'4) comprising a sequence selected from 16 sequences (S4) of (SEQ ID No: 4-19), given in the specification, where (A4) induces an immune response effective to reduce adherence of a microorganism that expresses the C. trachomatis antigen to epithelial cells of a subject;
- (2) a polynucleotide (N1) that encodes (A4);
- (3) an expression vector (V1) comprising (N1);
- (4) a cell (C1) comprising (V1);
- (5) making (M) a chimeric immunogen by culturing (C1) to express the chimeric immunogen from the expression vector, and isolating the immunogen from the cell culture;
- (6) a C. trachomatis antigen (A') having a sequence selected from (S4);
- (7) a composition (C2) comprising (A1);
- (8) a composition (C3) comprising (A'); and
- (9) a kit comprising an article of manufacture containing (C2) or (C3).

USE

USE - For inducing an immune response against Chlamydia trachomatis antigens, in a subject, (such as rodent, lagomorph or primate, especially a human) (claimed), including as a vaccine composition.

ADV

ADVANTAGE - The chimeric immunogen comprises an antigen having amino acid sequences of Chlamydia trachomatis, and additionally receptor binding domain for several receptors, and translocation domain that translocates from cell exterior to cell to interior; and are capable of inducing immune response specific for polypeptides comprising C. trachomatis major outer membrane protein (MOMP) sequences; and reducing or preventing the C. trachomatis adherence to epithelial cells. The chimeric immunogen is capable of eliciting immune response that recognizes heterologous antigen and/or is specific for the heterologous antigen. The heterologous antigen and the structure of the chimeric immunogen can be selected to facilitate eliciting a humoral, cellular and/or mucosal immune response. Further, depending on pathway by which chimeric immunogen is processed in antigen-presenting cell, chimeric immunogen can induce an immune response mediated by either class I or class II major histocompatibility complex (MHC). The chimeric immunogens can also be used to elicit a protective immune response without using attenuated or inactivated pathogens. Thus, avoid risk of incomplete inactivation or attenuation of a pathogen or reversion of the pathogen to a fully infectious state, and lead to infection.

TECH

BIOTECHNOLOGY - Preferred Antigen: The C. trachomatis comprises a sequence selected from the sequences (S4).

Preferred Composition: The C. trachomatis antigen (A'1) is inserted into domain Ib of Pseudomonas exotoxin A, so that the antigen replaces all or a portion of the domain Ib. The C. trachomatis antigen (A1) is located between the translocation domain and the endoplasmic reticulum retention domain. The chimeric immunogen (A1) comprises more than one of the C. trachomatis antigens (preferably Ala-Gly-Thr-Glu-Ala-Ala (SEQ ID No: 4) and Ala-Glu-Thr-Ile-Phe-Asp-Val-Thr-Thr-Leu-Asn-Pro-Thr-Ile-Ala-Gly-Ala-Gly-Asp-Val-Lys-Thr-Ser-Ala-Glu-Gly (SEQ ID No: 6); optionally (SEQ ID No: 4), Ala-Gly-Thr-Asp-Ala-Ala (SEQ ID No: 5) and (SEQ ID No: 6); or (SEQ ID No: 4) or (SEQ ID No: 5) and Gly-Ala-Lys-Pro-Thr-Ala-Thr-Thr-Gly-Asn-Ala-Thr-Ala-Pro-Ser-Thr-Leu-Thr-Ala-Arg-Glu (SEQ ID No: 9)). The chimeric translocation domain is selected from translocation domains from Pseudomonas exotoxin A, diphtheria toxin, pertussis toxin, cholera toxin, heat-labile E. coli enterotoxin, shiga toxin, or shiga-like toxin (preferably Pseudomonas exotoxin A; especially a domain comprising amino acids 280 - 364 of domain II of Pseudomonas exotoxin A). The receptor binding domain is selected from domain Ia of Pseudomonas exotoxin A; a receptor binding domain from cholera toxin, diphtheria toxin, shiga toxin, or shiga-like toxin; a monoclonal, polyclonal, or single-chain antibody; transforming growth factor-alpha (TGF-alpha), TGF-beta, epidermal growth factor (EGF), platelet derived growth factor (PDGF), insulin-like growth factor (IGF), fibroblast growth factor (FGF); interleukin (IL-1), IL-2, IL-3, IL-6; macrophage inflammatory protein-1a (MIP-1a), MIP-1b, macrophage factor (MCAF) or IL-8 (preferably domain Ia of Pseudomonas exotoxin A; especially domain Ia of Pseudomonas exotoxin A having an amino acid sequence of (SEQ ID No: 22), given in the specification. The receptor binding domain binds to alpha2-macroglobulin receptor, epidermal growth factor receptor, transferrin receptor, interleukin-2 receptor, interleukin-6 receptor, interleukin-8 receptor, Fc receptor, poly-IgG receptor, asialoglycopolyptide receptor, complementarity determining domain 3 (CD3), CD4, CD8, chemokine receptor, CD25, CD11B5 CD11C, CD80, CD86, tumor necrosis factor-alpha (TNF-alpha) receptor, TOLL receptor, macrophage colony stimulating factor (M-CSF) receptor, granulocyte macrophage colony stimulating factor (GM-CSF) receptor, scavenger receptor, or vascular endothelial growth factor (VEGF) receptor (preferably alpha2-macroglobulin receptor). The chimeric immunogen (A1) further comprises an endoplasmic reticulum retention domain (preferably enzymatically inactive domain III of Pseudomonas exotoxin A, inactivated by deleting a glutamate at position 553; especially an amino acid sequence selected from Arg-Asp-Glu-Leu (SEQ ID No: 20) or Lys-Asp-Glu-Leu (SEQ ID No: 21); particularly (SEQ ID No: 20).

Preferred Antigen: The immune response induced against the C. trachomatis antigen by the antigen (A') does not recognize an epitope having the amino acid sequence Gln-Leu-Gly (SEQ ID No: 36) and Ser-Ala-Glu-Gly-Gln-Leu-Gly (SEQ ID NO: 37); an epitope having the amino acid sequence Gly-Thr-Asp-Glu-Leu-Ala (SEQ ID NO: 38) and Ala-Glu-Cys-Gly-Thr-Asp-Glu-Leu-Ala (SEQ ID NO: 39); or an epitope having the amino acid sequence Thr-Thr-Asn-Val-Ala-Arg-Pro (SEQ ID NO: 40); when the antigen (A') comprises the amino acid sequence of (SEQ ID No: 6), (SEQ ID No: 7) and Thr-Thr-Ser-Asp-Val-Ala-Gly-Leu-Gln-Asn-Asp-Pro-Ala (SEQ ID No: 10), respectively.

ORGANIC CHEMISTRY - Preferred Composition: The composition (C2) or (C3) further comprises a diluent, excipient, vehicle or carrier.

PHARMACEUTICALS - Preferred Kit: The article contains a single-unit dose of the composition (C2) or (C3). The article is a sterile vial, an inhaler, or a device configured for nasal administration of the composition. The kit further comprises instructions for administering the composition to a subject, which comprise directing a medical professional

to administer the composition nasally or orally, or directing the subject to self-administer the composition nasally or orally.

L59 ANSWER 28 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2005-467099 [200547] WPIX
 TITLE: Conjugating peptide immunogen by reacting derivatized protein/polypeptide carrier with a reactive group of an amino acid of the peptide immunogen so that the peptide immunogen is conjugated to derivatized protein/polypeptide carrier
 DERWENT CLASS: B04; D16
 INVENTOR: ARUMUGHAM R; ARUMUGHAM R G; PRASAD A; PRASAD A K; PRASAD K A; KRISHNA P A
 PATENT ASSIGNEE: (AMHP-C) WYETH; (ELAN-C) ELAN PHARM INC
 COUNTRY COUNT: 108

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005058941	A2	20050630	(200547)*	EN	150	[10]
EP 1699810	A2	20060913	(200660)	EN		
NO 2006002765	A	20060914	(200668)	NO		
MX 2006006821	A1	20060901	(200706)	ES		
AU 2004299512	A1	20050630	(200707)	EN		
BR 2004017689	A	20070403	(200727)	PT		
IN 2006DN03396	A	20070504	(200746)	EN		
US 20070161088	A1	20070712	(200748)	EN		
CN 1934127	A	20070321	(200752)	ZH		
KR 2007026363	A	20070308	(200755)	KO		
JP 2007534650	T	20071129	(200780)	JA	100	
US 20080145373	A1	20080619	(200843)	EN		
US 20080299074	A1	20081204	(200882)	EN		
SG 149039	A1	20090129	(200920)	EN		
TW 2005033679	A	20051016	(200956)	ZH		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005058941	A2	WO 2004-US44093	20041217
US 20070161088	A1 Provisional	US 2003-530481P	20031217
US 20080145373	A1 Provisional	US 2003-530481P	20031217
US 20080299074	A1 Provisional	US 2003-530481P	20031217
AU 2004299512	A1	AU 2004-299512	20041217
BR 2004017689	A	BR 2004-17689	20041217
CN 1934127	A	CN 2004-80041798	20041217
EP 1699810	A2	EP 2004-817081	20041217
EP 1699810	A2 PCT Application	WO 2004-US44093	20041217
NO 2006002765	A PCT Application	WO 2004-US44093	20041217
MX 2006006821	A1 PCT Application	WO 2004-US44093	20041217
BR 2004017689	A PCT Application	WO 2004-US44093	20041217
IN 2006DN03396	A PCT Application	WO 2004-US44093	20041217
US 20070161088	A1 PCT Application	WO 2004-US44093	20041217
KR 2007026363	A PCT Application	WO 2004-US44093	20041217
JP 2007534650	T PCT Application	WO 2004-US44093	20041217
US 20080145373	A1 Div Ex	WO 2004-US44093	20041217
US 20080299074	A1 Div Ex	WO 2004-US44093	20041217
JP 2007534650	T	JP 2006-545618	20041217
IN 2006DN03396	A	IN 2006-DN3396	20060613

NO 2006002765 A	NO 2006-2765 20060613
MX 2006006821 A1	MX 2006-6821 20060615
KR 2007026363 A	KR 2006-714293 20060714
US 20070161088 A1	US 2006-583503 20061117
US 20080145373 A1 Div Ex	US 2006-583503 20061117
US 20080299074 A1 Div Ex	US 2006-583503 20061117
US 20080145373 A1	US 2007-841919 20070820
US 20080299074 A1	US 2007-841993 20070820
SG 149039 A1	SG 2008-9362 20041217
TW 2005033679 A	TW 2004-139610 20041217

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1699810 A2	Based on	WO 2005058941 A
MX 2006006821 A1	Based on	WO 2005058941 A
AU 2004299512 A1	Based on	WO 2005058941 A
BR 2004017689 A	Based on	WO 2005058941 A
KR 2007026363 A	Based on	WO 2005058941 A
JP 2007534650 T	Based on	WO 2005058941 A

PRIORITY APPLN. INFO: US 2003-530481P 20031217
 US 2003-530481P 20031217
 WO 2004-US44093 20041217
 US 2006-583503 20061117
 US 2007-841919 20070820
 US 2007-841993 20070820

DETD DETAILED DESCRIPTION - Conjugating a peptide immunogen comprising Abeta peptide or fragments of Abeta or analogs via a reactive group of an amino acid residue of the peptide immunogen to a protein/polypeptide carrier having one or more functional groups, comprises:

(A) derivatizing one or more of the functional groups of the protein/polypeptide carrier or optionally to a polypeptide linker attached to the protein/polypeptide carrier to generate a derivatized carrier with reactive sites;

(B) reacting the derivatized protein/polypeptide carrier of (a) with a reactive group of an amino acid of the peptide immunogen comprising Abeta peptide or fragments of Abeta or analogs under reaction conditions so that the peptide immunogen is conjugated to the derivatized protein/polypeptide carrier via at least one of the reactive sites, thus forming a conjugate; and

(C) further reacting the conjugate with a capping reagent to inactive free, reactive unreacted reactive sites on the derivatized protein/polypeptide carrier, where the conjugate elicits a desired immune against the Abeta peptide.

INDEPENDENT CLAIMS are also included for:

(1) a composition comprising a peptide immunogen-protein/polypeptide carrier conjugate where the protein/polypeptide carrier having the formula given in the specification, where C is a protein/polypeptide carrier and X is a derivatizable functional group of an amino acid residue on the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier, and m is an integer greater than 0, but less than or equal to 85, and where the peptide immunogen-protein/polypeptide carrier conjugate has the formula given in the specification, where C is the protein/polypeptide carrier and Xd is a derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier,

and, where P is a peptide immunogen comprising Abeta peptide or fragments of Abeta or analogs covalently attached to the derivatized functional group of the amino acid residue of the protein carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier, R is a capping molecule covalently attached to the derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier, thus preserving the functionality of the carrier so that it retains its ability to elicit the desired immune responses against the peptide immunogen comprising the Abeta peptide or fragments of Abeta or analogs that would otherwise not occur without a carrier, n is an integer greater than 0, but less than or equal to 85, and p is an integer greater than 0, but less than 85;

(2) a peptide immunogen-protein/polypeptide carrier conjugate generated from the method above;

(3) an immunogenic composition comprising a conjugate of a peptide immunogen with a protein/polypeptide carrier generated by the method above together with one or more pharmaceutical excipients, diluents, and/or adjuvants; and

(4) inducing an immune response in a mammalian subject.

TECH

BIOTECHNOLOGY - Preferred Method: In conjugating a peptide immunogen, the carrier is selected from human serum albumin, keyhole limpet hemocyanin (KLH), immunoglobulin molecules, thyroglobulin, ovalbumin, influenza hemagglutinin, PADRE polypeptide, malaria circumsporozoite (CS) protein, hepatitis B surface antigen (HBsAg19-28), Heat Shock Protein (HSP) 65, Mycobacterium tuberculosis, cholera toxin, cholera toxin mutants with reduced toxicity, diphtheria toxin, CRM197 protein that is cross-reactive with diphtheria toxin, recombinant Streptococcal C5a peptidase, Streptococcus pyogenes ORF1224, S. pyogenes ORF1664, S. pyogenes ORF2452, S. pneumoniae pneumolysin, pneumolysin mutants with reduced toxicity, Chlamydia pneumoniae ORF T367, C. pneumoniae ORF T858, Tetanus toxoid, HIV gp120 T1, components recognizing microbial surface adhesive matrix molecules (MSCRAMMS), growth factors, hormones, cytokines, or chemokines. The carrier contains a T-cell epitope. The carrier is also a bacterial toxoid. The growth factor or hormone is selected from IL-1, IL-2, gamma-interferon, IL-10, GM-CSF, MIP-1alpha, MIP-1beta, or RANTES. The peptide immunogen is an Abeta fragment, where the Abeta fragment is from the N-terminal half of Abeta. The Abeta fragment is selected from Abeta1-3, 1-4, 1-5, 1-6, 1-7, 1-9, 1-10, 1-11, 1-12, 1-16, 36, or 3-7. Preferably, the Abeta fragment is Abeta1-5, 1-7, 1-9, or 1-12. The Abeta fragment is also from the C-terminal half of Abeta. It is from Abeta33-42, 35-40, or 35-42. The Abeta fragment is also from the internal portion of Abeta, and is selected from Abeta13-28, 15-24, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, or 25-35. The Abeta fragment is also selected from Abeta1-3, 1-4, 1-5, 1-6, 1-7, 1-10, 1-11, 1-12, 1-16, 1-28 3-6, 3-7, 13-28, 15-24, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 25-35, 33-42, 35-40, or 35-42. The peptide immunogen further comprises at least one additional copy of the Abeta fragment. It further comprises at least one additional copy of the N-terminal fragment of Abeta. The peptide immunogen comprises from N-terminus to C-terminus, and additional copies of the N-terminal fragment of Abeta. The peptide immunogen is (Abeta1-7)₃ or (Abeta1-7)₅. It further comprises at least one additional copy of a different Abeta fragment. The Abeta peptide immunogen is a fragment of Abeta selected from Abeta7-11, 17-28, 1-28, 25-35, 35-40, or 35-42. It is linked at its C-terminus to the N-terminus of a carrier molecule to form a heterologous peptide. Alternatively, it is also linked at its N-terminus to the C-terminus of a carrier molecule to form a heterologous peptide. The peptide immunogen comprises from N-terminus to C-terminus, a first

carrier molecule linked at its C-terminus to the N-terminus of the Abeta fragment linked at its C-terminus to the N-terminus of a second carrier molecule to form a heterologous peptide. The method further comprises at least one additional copy of the carrier molecule. It also comprises at least one copy of a different carrier molecule. The first carrier and the second carrier are the same carrier molecules or are different carrier molecules. The carrier molecule is selected from a T-cell epitope, a B-cell epitope, or its combinations. The peptide immunogen is further comprised of one or more molecules of the Abeta fragment that are linked together in a multiple antigenic peptide (MAP) configuration. Preferably, the peptide immunogen is Abeta1-7 and the MAP configuration is a MAP4 configuration. Specifically, the peptide immunogen is (Abeta1-7)₃ and the MAP configuration is a MAP4 configuration, or (Abeta1-7)₅ and the MAP configuration is a MAP4 configuration. The functional group of one or more amino acid molecules of the protein/polypeptide carrier or of the optionally attached polypeptide linker is derivatized using a cross-linking reagent. The derivatizing reagent is a zero-length cross-linking reagent, a homobifunctional cross-linking reagent, or a heterobifunctional cross-linking reagent. The protein/polypeptide carrier is reacted with a haloacetylating agent, where the heterobifunctional reagent is a reagent which reacts with a primary or an epsilon-amine functional group of one or more amino acid residues of the protein/polypeptide carrier and a pendant thiol group of one or more amino acid residues of the peptide immunogen. The heterobifunctional reagent is N-succinimidyl bromoacetate, N-succinimidyl-3-(2-pyridyl-thio) propionate (SPDP), or succinimidyl 4-(N-maleimidomethyl) cyclohexane-1-carboxylate (SMCC). The primary or epsilon-amine functional group is lysine. The pendant thiol group is a cysteine residue of the peptide immunogen. The cysteine residue is localized at the amino-terminus of the peptide immunogen, at carboxy-terminus of the peptide immunogen, or internally in the peptide immunogen. The pendant thiol group is generated by a thiolating reagent, where the thiolating reagent is N-acetyl homocysteine-thio lactone. The capping reagent that is used to inactivate free reactive, functional groups on the activated protein/polypeptide carrier is selected from cysteamine, N-acetylcysteamine, or ethanolamine. It is also carrier is selected from sodium hydroxide, sodium carbonate, ammonium bicarbonate, or ammonia. The reactive group of the amino acid residue of the peptide immunogen is a free sulfhydryl group. One or more of the functional groups are on a linker, which is optionally attached to the protein/polypeptide carrier. The linker is a peptide linker, preferably polylysine. Alternatively, conjugating a peptide immunogen comprising Abeta peptide or fragments of Abeta or analogs to a protein/polypeptide carrier having the structure given in the specification, where C is a protein/polypeptide carrier and X is a derivatizable functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier, and where m is an integer greater than 0, but less than or equal to 85, comprises:

- (A) derivatizing one or more of the functional groups of the protein/polypeptide carrier or of the optionally attached linker molecule to generate a derivatized molecule with reactive sites;
- (B) reacting the derivatized protein/polypeptide carrier of (a) with a reactive group of an amino acid residue of the peptide immunogen comprising Abeta peptide or fragments of Abeta or analogs to form a covalently coupled peptide immunogen protein/polypeptide carrier conjugate; and
- (C) further reacting the conjugate with a capping reagent to inactivate the free reactive functional groups on the activated protein/polypeptide carrier, so that the capped groups are not free to react with other

molecules, thus preserving the functionality of the carrier, so that it retains its ability to elicit the desired immune responses against the peptide immunogen that would otherwise not occur without a carrier, so as to generate a capped peptide immunogen-protein/polypeptide carrier conjugate having the formula given in the specification, where C is the protein/polypeptide carrier and Xd is a derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier, P is a peptide immunogen molecule comprising Abeta peptide or fragments of Abeta or analogs covalently attached to the derivatized functional group of the amino acid residue of the protein carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier, R is a capping molecule covalently attached to the derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier, n is an integer greater than 0, but less than or equal to 85, and p is an integer greater than 0, but less than 85. Inducing an immune response in a mammalian subject comprises administering an amount of the immunogenic composition above to the subject.

Preferred Immunogenic Composition: In the immunogenic composition above, the adjuvants are selected from GM-CSF, 529 SE, IL-12, aluminum phosphate, aluminum hydroxide, M. tuberculosis, Bordetella pertussis, bacterial lipopolysaccharides, aminoalkyl glucosamine phosphate compounds, MPLTM (3-O-deacylated monophosphoryl lipid A), a polypeptide, Quil A, STIMULON QS-21, a pertussis toxin (PT), an Escherichia coli heat-labile toxin (LT), IL-1 alpha, IL-1beta, IL-2, IL-4, IL-5, IL-6, IL-7, IL-8, IL-10, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18, interferon-alpha, interferon-beta, interferon-gamma, G-CSF, TNF-alpha, or TNF-beta. Preferably, the peptide immunogen is Abeta, the carrier is CRM197, and the adjuvant is 529 SE.

L59 ANSWER 29 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2005-488538 [200549] WPIX
 DOC. NO. CPI: C2005-148866 [200549]
 TITLE: Conjugating peptide immunogen, by derivatizing functional groups of protein or polypeptide carrier, reacting reactive group of amino acid residue of peptide immunogen with carrier having functional groups, to produce conjugate
 DERWENT CLASS: B04; D16
 INVENTOR: ARUMUGHAM R; ARUMUGHAM R G; PRASAD A K; PRASAD K; PRASAD K A; KRISHNA P A; RASAPPA A G
 PATENT ASSIGNEE: (AMHP-C) WYETH; (ARUM-I) ARUMUGHAM R G; (PRAS-I) PRASAD A K; (AMHP-C) WYETH CORP
 COUNTRY COUNT: 108

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005058940	A2	20050630	(200549)*	EN	155[10]	
EP 1701968	A2	20060920	(200662)	EN		
NO 2006002687	A	20060915	(200668)	NO		
AU 2004299501	A1	20050630	(200707)	EN		
BR 2004017744	A	20070410	(200729)	PT		
US 20070134762	A1	20070614	(200741)	EN		
MX 2006006822	A1	20061201	(200743)	ES		
KR 2007027502	A	20070309	(200755)	KO		
CN 1984676	A	20070620	(200774)	ZH		

IN 2006DN03139	A	20070824 (200780)	EN
JP 2008505052	T	20080221 (200816)	JA 109
ZA 2006004957	A	20080130 (200816)	EN 163
SG 149013	A1	20090129 (200920)	EN
TW 2005033681	A	20051016 (200956)	ZH
NZ 548352	A	20090925 (200971)	EN

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005058940	A2	WO 2004-US42701	20041217
US 20070134762	A1 Provisional	US 2003-530480P	20031217
AU 2004299501	A1	AU 2004-299501	20041217
BR 2004017744	A	BR 2004-17744	20041217
CN 1984676	A	CN 2004-80037802	20041217
EP 1701968	A2	EP 2004-814839	20041217
TW 2005033681	A	TW 2004-139525	20041217
EP 1701968	A2	WO 2004-US42701	20041217
NO 2006002687	A	WO 2004-US42701	20041217
BR 2004017744	A	WO 2004-US42701	20041217
US 20070134762	A1	WO 2004-US42701	20041217
MX 2006006822	A1	WO 2004-US42701	20041217
KR 2007027502	A	WO 2004-US42701	20041217
CN 1984676	A	WO 2004-US42701	20041217
IN 2006DN03139	A	WO 2004-US42701	20041217
JP 2008505052	T	WO 2004-US42701	20041217
JP 2008505052	T	JP 2006-545540	20041217
ZA 2006004957	A	ZA 2006-4957	20041217
IN 2006DN03139	A	IN 2006-DN3139	20060601
NO 2006002687	A	NO 2006-2687	20060609
MX 2006006822	A1	MX 2006-6822	20060615
KR 2007027502	A	KR 2006-714273	20060714
US 20070134762	A1	US 2007-583464	20070116
SG 149013	A1	SG 2008-9163	20041217
NZ 548352	A	NZ 2004-548352	20041217
NZ 548352	A PCT Application	WO 2004-US42701	20041217

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1701968	A2	Based on WO 2005058940 A
AU 2004299501	A1	Based on WO 2005058940 A
BR 2004017744	A	Based on WO 2005058940 A
MX 2006006822	A1	Based on WO 2005058940 A
KR 2007027502	A	Based on WO 2005058940 A
CN 1984676	A	Based on WO 2005058940 A
JP 2008505052	T	Based on WO 2005058940 A
NZ 548352	A	Based on WO 2005058940 A

PRIORITY APPLN. INFO: US 2003-530480P 20031217
 US 2007-583464 20070116
 US 2003-530480 20031217

NOV NOVELTY - Conjugating (M1) peptide ~~immunogen~~ through reactive group of amino acid residue of peptide ~~immunogen~~ to protein/polypeptide carrier (PC) having functional groups, by derivatizing functional groups of PC, reacting derivatized PC with peptide ~~immunogen~~ to produce conjugate, reacting conjugate with capping reagent to inactive free, reactive unreacted functional groups, so that conjugate elicits ~~immune~~

responses against peptide immunogen, is new.

DETD DETAILED DESCRIPTION - Conjugating (M1) a peptide immunogen through a reactive group of an amino acid residue of the peptide immunogen to a protein/polypeptide carrier having one or more functional groups, involves derivatizing one or more of the functional groups of the protein/polypeptide carrier or optionally to a polypeptide linker attached to the protein/polypeptide carrier to generate a derivatized carrier with reactive sites, reacting the derivatized protein/polypeptide carrier with a reactive group of an amino acid of the peptide immunogen under reaction conditions such that the peptide immunogen is conjugated to the derivatized protein/polypeptide carrier through the functional groups, and further reacting the conjugate with a capping reagent to inactive free, reactive unreacted functional groups on the derivatized protein/polypeptide carrier, thus preserving the functionality of the carrier, such that it retains its ability to elicit the desired immune responses against the peptide immunogen that would otherwise not occur without a carrier.

INDEPENDENT CLAIMS are also included for:

(1) conjugating (M2) a peptide immunogen to a protein/polypeptide carrier having the structure (F1), involves derivatizing one or more of the functional groups of the protein/polypeptide carrier or of the optionally attached linker molecule to generate a derivatized molecule with reactive sites, reacting the derivatized protein/polypeptide carrier with a reactive group of an amino acid residue of the peptide immunogen to form a covalently coupled peptide immunogen- protein/polypeptide carrier conjugate, and further reacting the conjugate with a capping reagent to inactivate the free reactive functional groups on the activated protein/polypeptide carrier, such that the capped groups are not free to react with other molecules, thus preserving the functionality of the carrier, such that it retains its ability to elicit the desired immune responses against the peptide immunogen that would otherwise not occur without a carrier, so as to generate a capped peptide immunogen-protein/polypeptide carrier conjugate having the formula (F2);

(2) a peptide immunogen-protein/polypeptide carrier conjugate (I), where the protein/polypeptide carrier and immunogen-protein/polypeptide carrier conjugate has the formula (F1) and (F2);

(3) a peptide immunogen-protein/polypeptide carrier conjugate generated by (M2);

(4) an immunogenic composition (C1), comprising a conjugate of a peptide immunogen with a protein/polypeptide carrier generated by (M2).

C = protein/polypeptide carrier;

X = derivatizable functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier;

m = integer greater than 0, but less than or equal to 85;

Xd = derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to the protein/polypeptide carrier;

P = peptide immunogen molecule covalently attached to the derivatized functional group of the amino acid residue of the protein carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier;

R = capping molecule covalently attached to the derivatized functional group of an amino acid residue of the protein/polypeptide carrier or optionally of an amino acid residue of a peptide linker covalently attached to a protein/polypeptide carrier;

n = integer greater than 0, but less than or equal to 85; and

p = integer greater than 0, but less than 85.

USE

USE - (M1) is useful for conjugating a peptide immunogen through a

reactive group of an amino acid residue of the peptide immunogen to a protein/polypeptide carrier having one or more functional groups. The peptide immunogen is chosen from bacterial protein, viral protein, and eukaryotic protein. The peptide immunogen is derived from a protein antigen from a bacterium. The bacterium is chosen from *S.pneumoniae*, *S.aureus*, *S.epidermidis*, *Neisseria meningitidis*, *N.gonorrhoeae*, *H. influenzae*, *Escherichia coli*, *Klebsiella pneumoniae*, *Listeria monocytogenes*, *Vibrio cholerae*, *Clostridium perfringens*, *Clostridium botulinum*, *Pseudomonas aerations*, *Salmonella typhimurium*, *Borrelia burgdorferi*, *S.flexneri*, *S. boydii*, *S.dysenteriae*, *Alloioococcus otitidis* and Group B streptococci. The peptide immunogen is derived from a protein antigen from a virus. The virus is chosen from human immunodeficiency virus (HIV), herpes simplex virus (HSV), human papilloma virus (HPV), parainfluenza virus (PIV), vesicular stomatitis virus (VSV), respiratory syncytial virus (RSV), Epstein-Barr virus (EBV), coronavirus, vaccinia virus, rotavirus, rabies virus, hepatitis C virus (HCV) and hepatitis B virus (HBV). The peptide immunogen is derived from a protein antigen from a fungus. The fungus is chosen from *Candida albicans*, *Cryptococcus neoformans*, *Coccidioides sp.*, *Histoplasma sp.*, and *Aspergillus sp.*. The peptide immunogen is derived from a protein antigen from a parasite. The parasite is chosen from a *Plasmodium*, a *Trypanosome*, a *Schistosome*, and a *Leishmania*. The peptide immunogen is derived from a protein antigen from a eukaryote. The eukaryote is a human. The peptide immunogen from the human is derived from a malignant tumor. The tumor antigen is chosen from a renal cell carcinoma antigen, a breast carcinoma antigen, a carcinoembryonic antigen, a melanoma (MAGE) antigen, and a prostate cancer specific antigen. The peptide immunogen is from a human Abeta polypeptide. (C1) is useful for inducing an immune response against above pathogens, in a mammalian subject (all claimed), and Alzheimer's disease and cancer.

TECH

BIOTECHNOLOGY - Preferred Method: In (M1), the carrier is chosen from human serum albumin, keyhole limpet hemocyanin (KLH), and immunoglobulin molecules, thyroglobulin, ovalbumin, influenza hemagglutinin, PADRE polypeptide, malaria circumsporozoite (CS) protein, hepatitis B surface antigen (HBSAg19.23), heat Shock Protein (HSP) 65, *Mycobacterium tuberculosis*, cholera toxin, cholera toxin mutants with reduced toxicity, diphtheria toxin, CRM(197) protein that is cross-reactive with diphtheria toxin, recombinant Streptococcal C5a peptidase, *Streptococcus pyogenes* ORF1224, *S.pyogenes* ORF1664, *S. pyogenes* ORF2452, *Chlamydia pneumoniae* ORF T367, *C.pneumoniae* ORF T858, Tetanus toxoid, HIV gp120 T1, components recognizing microbial surface adhesive matrix molecules (MSCRAMMS), growth factors, hormones, cytokines and chemokines. The carrier contains a T-cell epitope. The carrier is a bacterial toxoid, influenza hemagglutinin, PADRE polypeptide, malaria circumsporozoite (CS) protein, and hepatitis B surface antigen, heat shock protein 65 (HSP 65), a polypeptide from *Mycobacterium tuberculosis* (BCG), tetanus toxoid. The bacterial toxoid is CRM 197. The carrier is recombinant Streptococcal C5a peptidase, *S.pyogenes* ORF 1224, *S.pyogenes* ORF 1664, *S.pyogenes* ORF 2452, *C.pneumoniae* ORF T367. The carrier is *C.pneumoniae* ORF T858. The carrier is a growth factor or hormone, which stimulates or enhances immune response. The growth factor or hormone is chosen from IL-1, IL-2, γ -interferon, IL-10, GM-CSF, macrophage inflammatory protein (MIP)-1 α , MIP-1 β and regulated upon activation, normal T-cell expressed and secreted (RANTES). The peptide immunogen is chosen from bacterial protein, viral protein, and eukaryotic protein. The peptide immunogen is derived from a protein antigen from a bacterium. The peptide immunogen is derived from a protein antigen from a eukaryote. The eukaryote is a human. The peptide immunogen from the human is derived from a malignant tumor. The tumor antigen is chosen from a renal cell carcinoma antigen, a breast carcinoma

antigen, a carcinoembryonic antigen, a melanoma (MAGE) antigen, and a prostate cancer specific antigen. The peptide immunogen is from a human Abeta polypeptide, and is derived from the N-terminal region of Abeta polypeptide. The peptide immunogen is derived from the C-terminal region of Abeta polypeptide. The peptide immunogen is derived from the internal region of Abeta polypeptide. The Abeta peptide immunogen is a fragment of Abeta chosen from Abeta 1-5, 1-6, 1-7, 1-10, 1-12, 3-7, 1-3, and 1-4. The Abeta peptide immunogen is a fragment of Abeta chosen from Abeta 7-11, 3-28, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 17-28, 1-28, 25-35, 35-40 and 35-42. The fragments of Abeta peptide immunogen are fused to another peptide immunogen. The one molecule of an Abeta peptide immunogen is fused at its C-terminus to the N-terminus of a molecule of the same Abeta peptide immunogen. The molecule of an Abeta peptide immunogen is fused at its C-terminus to the C-terminus of another molecule of the same Abeta peptide immunogen. The molecule of an Abeta peptide immunogen is fused at its C-terminus to the C-terminus of a different molecule of an Abeta peptide immunogen. The one molecule of an Abeta peptide immunogen, is fused at its N-terminus to the C-terminus of a molecule of a different beta peptide immunogen. The Abeta peptide immunogen is derived from the N-terminal region of beta polypeptide, and is chosen from Abeta 1-5, 1-6, 1-7, 1-10, 1-12, 3-7, 1-3, and 1-4. The Abeta peptide immunogen is a fragment of Abeta chosen from Abeta 7-11, 3-28, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 17-28, 1-28, 25-35, 35-40 and 35-42. The molecules of an Abeta 3 peptide immunogen are linked to one or more molecules of a heterologous peptide. The Abeta peptide immunogen is derived from the N-terminal region of Abeta polypeptide, and is chosen from Abeta 1-5, 1-6, 1-7, 1-10, 1-12, 3-7, 1-3, and 1-4. The Abeta peptide immunogen is a fragment of Abeta chosen from Abeta 7-11, 3-28, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 17-28, 1-28, 25-35, 35-40 and 35-42. The heterologous peptide is chosen from a T-cell epitope, a B-cell epitope and their combinations. The molecules of Abeta peptide immunogen are linked together in a multiple antigenic peptide (MAP) configuration. The molecules of Abeta peptide immunogen are linked together with one or more molecules of a different Abeta peptide immunogen in a multiple antigenic peptide (MAP) configuration. The Abeta peptide immunogen is derived from the N-terminal region of Abeta polypeptide, and is chosen from Abeta 1-5, 1-6, 1-7, 1-10, 1-12, 3-7, 1-3, and 1-4. The Abeta peptide immunogen is a fragment of Abeta chosen from Abeta 7-11, 3-28, 16-22, 16-23, 17-23, 17-24, 18-24, 18-25, 17-28, 17-28, 1-28, 25-35, 35-40 and 35-42. The functional group of one or more amino acid molecules of the protein/polypeptide carrier or of the optionally attached polypeptide linker is derivatized using a cross-linking reagent. The derivatizing reagent is a zero-length cross-linking reagent. The derivatizing reagent is a homobifunctional cross-linking reagent. The derivatizing reagent is a heterobifunctional cross-linking reagent. The protein/polypeptide carrier is reacted with a haloacetylating agent. The heterobifunctional reagent is a reagent which reacts with a primary or an epsilon-amine functional group of one or more amino acid residues of the protein/polypeptide carrier and a pendant thiol group of one or more amino acid residues of the peptide immunogen. The heterobifunctional reagent is chosen from N-succinimidyl bromoacetate, N-succinimidyl-3-(2-pyridyl-thio) propionate (SPDP), and succinimidyl 4-(N-maleimidomethyl) cyclohexane-1-carboxylate (SMCC). The primary or epsilon-amine functional group is lysine. The pendant thiol group is a cysteine residue of the peptide immunogen. The cysteine residue is localized at the amino-terminus of the peptide immunogen. The cysteine residue is localized at carboxy-terminus of the peptide immunogen. The cysteine residue is localized internally in the peptide immunogen. The pendant thiol group is generated by a thiolating reagent. The thiolating reagent is N-acetyl homocysteine thio lactone. The capping reagent that is used to

inactivate tree reactive, functional groups on the activated protein/polypeptide carrier is chosen from the reagent group such as cysteamine, N-acetylcysteamine, and ethanolamine. The capping reagent that is used to inactivate free reactive, functional groups on the activated protein/polypeptide carrier is chosen from sodium hydroxide, sodium carbonate, ammonium bicarbonate and ammonia. The reactive group of the amino acid residue of the peptide immunogen is a free sulfhydryl group. The functional groups are on a linker, which is optionally attached to the protein/polypeptide carrier. The linker is a peptide linker. The peptide linker is polylysine.

L59 ANSWER 30 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2005-031596 [200503] WPIX
 DOC. NO. CPI: C2005-010049 [200503]
 TITLE: Mammalian cells laden with bacteria, useful for treatment and prophylaxis of e.g. tumors and chronic inflammation, function as carriers for therapeutic nucleic acid
 DERWENT CLASS: B04; D16
 INVENTOR: FENSTERLE J; GENTSCHEV I; GOEBEL W; POTAPENKO T; RAPP U; RAPP U R; SCHMIDT A; STRITZKER J; STRITZKER J
 PATENT ASSIGNEE: (MEDI-N) MEDINNOVA GES INNOVATIONEN AUS AKAD; (MEDI-N) MEDINNOVA GES MEDIZINISCHE INNOVATIONEN; (ZETR-C) ZENTARIS GMBH
 COUNTRY COUNT: 107

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2004108155	A1	20041216	(200503)*	DE	39	[4]
DE 10326187	A1	20050105	(200503)	DE		
EP 1631310	A1	20060308	(200618)	DE		
NO 2006000095	A	20060303	(200621)	NO		
DE 112004001497	T	20060427	(200629)	DE		
IN 2005MN01351	A	20090731	(200644)	EN		
BR 2004011210	A	20060718	(200649)	PT		
AU 2004244701	A1	20041216	(200654)	EN		
ZA 2005009476	A	20060830	(200662)	EN	34	
US 20060240038	A1	20061026	(200671)	EN		
CN 1802175	A	20060712	(200675)	ZH		
JP 2006526396	T	20061124	(200677)	JA	22	
MX 2005013195	A1	20060801	(200701)	ES		
KR 2006090164	A	20060810	(200705)	KO		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004108155	A1	WO 2004-DE1178	20040607
DE 10326187	A1	DE 2003-10326187	20030606
AU 2004244701	A1	AU 2004-244701	20040607
BR 2004011210	A	BR 2004-11210	20040607
CN 1802175	A	CN 2004-80015761	20040607
DE 112004001497	T	DE 2004-112004001497	20040607
EP 1631310	A1	EP 2004-738631	20040607
EP 1631310	A1	WO 2004-DE1178	20040607
DE 112004001497	T	WO 2004-DE1178	20040607
BR 2004011210	A	WO 2004-DE1178	20040607
US 20060240038	A1	WO 2004-DE1178	20040607
JP 2006526396	T	WO 2004-DE1178	20040607

MX 2005013195 A1	WO 2004-DE1178 20040607
KR 2006090164 A	WO 2004-DE1178 20040607
ZA 2005009476 A	ZA 2005-9476 20051123
KR 2006090164 A	KR 2005-723452 20051206
MX 2005013195 A1	MX 2005-13195 20051206
JP 2006526396 T	JP 2006-508123 20040607
NO 2006000095 A	NO 2006-95 20060106
US 20060240038 A1	US 2006-559663 20060621
IN 2005MN01351 A PCT Application	WO 2004-DE1178 20040607
IN 2005MN01351 A	IN 2005-MN1351 20051202

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1631310 A1	Based on	WO 2004108155 A
DE 112004001497 T	Based on	WO 2004108155 A
BR 2004011210 A	Based on	WO 2004108155 A
AU 2004244701 A1	Based on	WO 2004108155 A
JP 2006526396 T	Based on	WO 2004108155 A
MX 2005013195 A1	Based on	WO 2004108155 A
KR 2006090164 A	Based on	WO 2004108155 A

PRIORITY APPLN. INFO: DE 2003-10326187 20030606

ADV ADVANTAGE - Target localization of (B) is improved by loading them into (A), i.e. after intravenous injection of (A), a higher proportion of (B) reaches the target compared with injection of free (B). Bacterial components may also improve the local immune response.

TECH

BIOLOGY - Preferred Materials: (A) are inactivated, e.g. by irradiation. (B) are live, non-virulent or have had their virulence attenuated. Over 20 suitable species are listed, e.g. Mycobacterium tuberculosis; Legionella pneumophila; Salmonella typhi; Pasteurella haemolytica; Listeria monocytogenes or Chlamydia trachomatis. Most preferred are Listeria and Salmonella, especially cells that have a defect in a metabolic enzyme, particularly in the aroA gene required for biosynthesis of aromatic amino acids; retain expression of proteins required for motility; and lack the chromosomal trpS gene (encoding tryptophanyl-tRNA synthase), which is complemented by a plasmid. They may also be altered to stabilize replication and to express an endolysin so that (B) undergo lysis in the cytosol of (A), releasing enclosed plasmids and ensuring stable expression of active agents encoded by these plasmids. (B) can include DNA that encodes at least one active agent (I), where (I) may be expressed by the bacterium itself or under control of a eukaryotic promoter. (I) may be produced intracellularly, on the cell membrane or as a secreted protein. Typical of many specified (I) are antigens (from viruses, bacteria, mycoplasma, parasites or tumor cells); antibodies or their fragments; enzymes (e.g. for conversion of prodrugs); cytokines, chemokines, interferons or growth factors (or inhibitory proteins of the last four). Where dendritic cells or macrophages are used, they may also function as carriers for an inoculating antigen, preferably loaded into the cells ex vivo, and particularly peptides. Optionally (A) are fused with other cells that express a tissue or tumor antigen, preferably autologous tumor cells.

L59 ANSWER 31 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2005-038743 [200504] WPIX
 CROSS REFERENCE: 1997-489246; 1999-095474; 2003-074978
 DOC. NO. CPI: C2005-012876 [200504]
 TITLE: Stimulating a systemic immune response to an antigen

comprises providing a liposomal preparation comprising lyophilized liposomes containing the antigen

DERWENT CLASS: B04; D16
 INVENTOR: SEE D M; SEE J R
 PATENT ASSIGNEE: (ORAL-N) ORAL VACCINE TECHNOLOGIES INC
 COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20040258746	A1	20041223	(200504)*	EN	21	[15]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20040258746	A1	CIP of	WO 1997-US4634 19970324
US 20040258746	A1	CIP of	US 1997-882968 19970626
US 20040258746	A1	CIP of	US 1997-948568 19971010
US 20040258746	A1	CIP of	US 1998-7297 19980114
US 20040258746	A1	Div Ex	US 1999-358962 19990722
US 20040258746	A1	Cont of	US 2000-706083 20001103
US 20040258746	A1	Cont of	US 2002-57484 20020125
US 20040258746	A1		US 2004-821691 20040408

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 20040258746	A1 CIP of	US 6117449 A
US 20040258746	A1 CIP of	US 6207185 B

PRIORITY APPLN. INFO: US 2004-821691 20040408
 WO 1997-US4634 19970324
 US 1997-882968 19970626
 US 1997-948568 19971010
 US 1998-7297 19980114
 US 1999-358962 19990722
 US 2000-706083 20001103
 US 2002-57484 20020125

TI Stimulating a systemic immune response to an antigen comprises providing a liposomal preparation comprising lyophilized liposomes containing the antigen

TT TT: STIMULATING SYSTEMIC IMMUNE RESPOND ANTIGEN COMPRISE LIPOSOME PREPARATION LYOPHILISE CONTAIN

NOV NOVELTY - Stimulating a systemic immune response to an antigen in a mammal comprises providing a liposomal preparation comprising lyophilized liposomes containing at least one antigen.

DETD DETAILED DESCRIPTION - Stimulating a systemic immune response to an antigen in a mammal comprises:

(a) providing a liposomal preparation comprising lyophilized liposomes containing at least one antigen, where the liposomes have at least two sizes, before lyophilization, e.g. small liposomes of 20 nm to 1 micron, medium liposomes of 1-3 microns, or large liposomes of 3-20 microns; and

(b) orally administering an amount of the liposomal preparation to a mammal, where antigen containing liposomes are absorbed in the Peyer's patches of the gut of the mammal and are taken up by macrophages in the Peyer's patches to stimulate a systemic immune response.

USE

USE - The method is useful for stimulating a systemic immune response to an antigen in a mammal.

TECH

BIOTECHNOLOGY - Preferred Method: The liposomes are multi-lamellar before lyophilization. The liposomal preparation is contained within an enterically-coated capsule. The liposomal preparation comprises (i) at least 5% by volume small liposomes, at least 10% by volume medium liposomes and at least 20% by volume large liposomes, or (ii) 10% by volume small liposomes, 25% by volume medium liposomes and 65% by volume large liposomes. The liposomes comprise at least two different antigens. The liposomes comprise at least one antigen, e.g. inactivated HIV I, HIV II, Hepatitis B or C antigens. The liposomes comprise at least one antigen, e.g. polio 1 to 3, hepatitis A through N, coxsackie B1-B6, mumps, measles, rubella, respiratory syncytial virus, parainfluenza 1-4, influenza A to C, adenovirus, Mycoplasma pneumonia, Streptococcus pneumonia, Chlamydia trachomatis, Pneumoniae, Psittacocci, Hemophilus influenza, Meningococcus, Malaria, Leishmania, Brucella, Trypanosoma brucei strains, Mycobacterium tuberculosis, Pseudomonas, Escherichia coli Salmonella, Trypanosoma cruzi, yellow fever virus, or Vibrio cholerae. The antigen containing liposomes are capable of being absorbed in the Peyer's patches of the gut of the mammal and are capable of being taken up by macrophages in the Peyer's patches to stimulate a systemic immune response without the presence of an adjuvant or without generating a typical adjuvant effect. The liposomal preparation is prepared by:

(i) preparing liposomes containing the at least one antigen, and reducing the size of a portion of the liposomes to produce liposomes having a size, e.g. small and medium liposome, where a remainder of the liposomes are not altered so that the remainder of the liposomes has a size, e.g. medium and large liposomes, where the size of the remainder liposomes is different from the reduced size of the portion of liposomes; or by

(ii) preparing liposomes containing the at least one antigen, reducing the size of a first portion of the liposomes to produce small liposomes, and reducing the size of a second portion of the liposomes to produce medium liposomes.

The portion of the liposomes is altered to produce small liposomes, where the remainder of the liposomes that are not altered are all medium or all large liposomes. The portion of the liposomes are altered to produce medium liposomes, where the remainder of the liposomes that are not altered are all large liposomes. The size of the portion of the liposome is reduced by sonication, by extrusion through a filter, or by microfluidization.

L59 ANSWER 32 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2003-300556 [200329] WPIX
 DOC. NO. CPI: C2003-078253 [200329]
 TITLE: New immunogenic composition comprising an immunogen, a first adjuvant functioning as a directing molecule, and a second adjuvant functioning as a stimulant, useful as a vaccine and for inducing the production of antibodies
 DERWENT CLASS: B04; D16
 INVENTOR: CAMPBELL R; CAMPBELL R L; MIKSZTA J A; ROBERT L C
 PATENT ASSIGNEE: (BECT-C) BECTON DICKINSON & CO; (CAMP-I) CAMPBELL R L; (MIKS-I) MIKSZTA J A
 COUNTRY COUNT: 100

PATENT INFO ABBR.:

PATENT NO

KIND DATE

WEEK

LA PG

MAIN IPC

WO 2003015694	A2	20030227	(200329)*	EN	27[7]
US 20030138434	A1	20030724	(200352)	EN	
AU 2002355945	A1	20030303	(200452)	EN	
EP 1461074	A2	20040929	(200463)	EN	
JP 2004538330	T	20041224	(200502)	JA	91
MX 2004001224	A1	20040601	(200504)	ES	
US 20050152873	A1	20050714	(200547)	EN	
CN 1604792	A	20050406	(200553)	ZH	
IN 2004CN00291	A	20051209	(200604)	EN	
BR 2002011926	A	20061212	(200701)	PT	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003015694	A2	WO 2002-US25511	20020812
US 20030138434	A1 Provisional	US 2001-311387P	20010813
US 20050152873	A1 Provisional	US 2001-311387P	20010813
IN 2004CN00291	A	WO 2002-US25511	
US 20030138434	A1	US 2002-142966	20020513
US 20050152873	A1 Div Ex	US 2002-142966	20020513
AU 2002355945	A1	AU 2002-355945	20020812
CN 1604792	A	CN 2002-820220	20020812
EP 1461074	A2	EP 2002-752793	20020812
EP 1461074	A2	WO 2002-US25511	20020812
JP 2004538330	T	WO 2002-US25511	20020812
MX 2004001224	A1	WO 2002-US25511	20020812
JP 2004538330	T	JP 2003-520455	20020812
MX 2004001224	A1	MX 2004-1224	20040209
IN 2004CN00291	A	IN 2004-CN291	20040212
US 20050152873	A1	US 2004-2678	20041203
BR 2002011926	A	BR 2002-11926	20020812
BR 2002011926	A	WO 2002-US25511	20020812

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002355945	A1	WO 2003015694 A
EP 1461074	A2	WO 2003015694 A
JP 2004538330	T	WO 2003015694 A
MX 2004001224	A1	WO 2003015694 A
BR 2002011926	A	WO 2003015694 A

PRIORITY APPLN. INFO: US 2002-142966 20020513
 US 2001-311387P 20010813
 US 2004-2678 20041203

DETD DETAILED DESCRIPTION - An immunogenic composition comprising an immunogen, a first adjuvant functioning as a directing molecule, and a second adjuvant functioning as a stimulant. The first and second adjuvants are chemically distinct molecules. The immunogen and adjuvants are present in amounts sufficient to result in an improved immune response relative to that resulting from the immunogen and just one of the first or second adjuvants.

AN INDEPENDENT CLAIM is also included for inducing an immune response by administering an immunogenic composition defined above, to a subject at a desired site.

TECH

BIOTECHNOLOGY - Preferred Composition: The stimulant is a weak stimulant.

The stimulant is saponin or their derivative including a saponin component, and is preferably synthetic. The stimulant may also be a CpG DNA, nucleic acid, cytokine, or chemokine. The stimulant is selected from GM-CSF, IL-1-beta, IL-2, IL-4, IL-7, IL-12, monophosphoryl lipid A, 3-Q-desacyl-4'-monophosphoryl lipid A, IL-1 beta 163-171 peptide (Sclavo Peptide), 25-dihydroxyvitamin D3, calcitinin-gene regulated peptides, Dehydroepiandrosterone (DHEA), N-Acetylglucosaminy-(P1-4)-N-acetylmuramyl-L-alanyl-D-glutamine (GMDP), dimethyl dioctadecyl or disteary ammonium bromide (DDA)/Zinc L-proline, muramyl dipeptide (MDP), formylated-Met-Leu-Phe (fMLP), N-acetyl myramyl-L-threonyl-D-isoglutamine (Threonyl-MDP), N-acetyl-L-alanyl-D-isoglytaminyl-L-alanine-2-(1,2-dipalmitoyl-sn-glycero-3-(hydroxy-phosphoryloxy)ethylamide monosodium salt (MTP-PE), Nac-Mur-L-Ala-D-Gln-OCH3, Nac-Mur-L-Thr-D-isoGln-sn-glycerol dipalmitoyl, Nac-Mur-D-Ala-D-isoGln-sn-glycerol dipalmitoyl, 1-(2-methyropyl)-1H-Imidazol(4,5-c)quinolin-4-amine, 4-Amino-otec-dimethyl-2.ethoxymethyl-1H-imidazo(4,5-c)quinoline-1-ethanol, N-acetylglucosaminy-N-acetylmuramyl-L-Ala-D-isoGlu-G-Ala-glycerol dipalmitate (DTP-GDP), N-acetylglucosaminy-N-acetyluramyl-L-Ala-D-isoGlu-L-Ala-dipalmitoxy propylamide (DTP-DPP), gamma interferon, 7-allyl-8-oxoguanosine, poly-adenylic acid-polyuridylic acid complex, MIP-1a, MIP-3a, dibutylphthalate, dibutyl phthalate analogues, and C5a. The composition is free from agents causing visible external toxic or allergic symptoms. The immunogen is antigen, which is an expression product of a nucleic acid, a whole cell, a protein, protein mixture, membrane extract, mammalian cells, virus or bacteria. The bacterium is *Chlamydia*, specifically *C. trachomatis*, *C. pneumoniae* or *C. psittaci*. The *Chlamydia* is an elementary body and is inactivated. The directing molecule is alpha 2-macroglobulin (Alpha 2-M), a CD91 binding fragment of A2M, an antibody, or an immunogenic specific fragment, where the antibody or its fragment is specific for an antigen presenting cell (APC) receptor, possesses an epitope capable of binding to an APC receptor, or is not specific for the immunogen. The antibody complementarity determining regions (CDRs) may or may not be specific for the APC, immunogen or stimulant. The antibody is (non)specific for one stimulant. The directing molecule binds to transferrin, mannose, a sialoglycoproteins receptor or CD91. The directing molecule is a complement or heat shock protein or its fragment capable of binding to APC, is an opsonizing molecule, or comprises a molecule directly or indirectly linked to an APC receptor. The directing molecule and the immunogen form a complex. The immunogenic composition is a vaccine, and is frozen, lyophilized, freeze dried or otherwise reconstitutable. The composition is substantially liposome-free, or free of alum. The immunogenic composition further comprises at least one antibody or its fragment, which may or may not be specific for the immunogen.

Preferred Method: The immune response includes generating antibodies. The method further comprises recovering the antibody from the subject, where the antibody has Ka values of 10⁴-10¹³ moles/liter. The stimulant contributes to APC migration or maturation, or attracts APC.

L59 ANSWER 33 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2002-643387 [200269] WPIX
 TITLE: Modifying a bacterium to enhance immunogenicity, as vaccines for preventing bacterial infections, e.g. tuberculosis comprises reducing the activity of an anti-apoptotic enzyme, e.g. superoxide dismutase produced by the bacterium
 DERWENT CLASS: B04; D16
 INVENTOR: BOCHAN M R; KERNODLE D S
 PATENT ASSIGNEE: (USGO-C) US DEPT VETERANS AFFAIRS; (BOCH-I) BOCHAN M R; (KERN-I) KERNODLE D S; (UVAN-C) UNIV VANDERBILT

COUNTRY COUNT: 98

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002062298	A2	20020815	(200269)*	EN	164	[25]
EP 1361794	A2	20031119	(200377)	EN		
AU 2002240269	A1	20020819	(200427)	EN		
US 20040109875	A1	20040610	(200438)	EN		
ZA 2003006058	A	20040825	(200466)	EN	162	
JP 2005504502	T	20050217	(200513)	JA	263	
IN 2003DN01267	A	20050527	(200577)#	EN		
AU 2002240269	B2	20070621	(200765)	EN		
JP 4197614	B2	20081217	(200918)	JA	95	
IN 2010DN02057	A	20100820	(201064)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002062298	A2	WO 2002-US3451	20020207
AU 2002240269	A1	AU 2002-240269	20020207
AU 2002240269	B2	AU 2002-240269	20020207
EP 1361794	A2	EP 2002-706163	20020207
JP 2005504502	T	JP 2002-562306	20020207
JP 4197614	B2	JP 2002-562306	20020207
EP 1361794	A2 PCT Application	WO 2002-US3451	20020207
US 20040109875	A1 PCT Application	WO 2002-US3451	20020207
JP 2005504502	T PCT Application	WO 2002-US3451	20020207
JP 4197614	B2 PCT Application	WO 2002-US3451	20020207
ZA 2003006058	A	ZA 2003-6058	20030806
IN 2003DN01267	A	IN 2003-DN1267	20030811
US 20040109875	A1	US 2004-467644	20040120
IN 2010DN02057	A PCT Application	WO 2002-US3451	20020207
IN 2010DN02057	A Div Ex	IN 2003-DN1267	20030811
IN 2010DN02057	A	IN 2010-DN2057	20100323

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1361794	A2 Based on	WO 2002062298 A
AU 2002240269	A1 Based on	WO 2002062298 A
JP 2005504502	T Based on	WO 2002062298 A
AU 2002240269	B2 Based on	WO 2002062298 A
JP 4197614	B2 Previous Publ	JP 2005504502 T
JP 4197614	B2 Based on	WO 2002062298 A

PRIORITY APPLN. INFO: US 2001-322989P 20010918
 US 2001-267328P 20010207
 IN 2003-DN1267 20030811
 US 2004-467644 20040120

DET DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (1) a modified bacterium (I) made by (M1);
- (2) an immunogenic composition comprising (I);
- (3) an attenuated intracellular bacterium, further modified to reduce the activity of an anti-apoptotic enzyme of the bacterium;
- (4) modifying a bacterium (M2) so it retains or increases immunogenicity but loses or reduces pathogenicity in a subject, comprising

reducing but not eliminating an activity of an enzyme produced by the bacterium, where reducing the activity of the enzyme attenuates the bacterium;

(5) bacteria modified by (M2);

(6) a composition (II) comprising any of the bacterium, and a carrier;

(7) producing (M3) an immune response by an immune cell of the subject, comprising contacting the cell wall with (II) or administering (II) to the subject; and

(8) preventing (M4) an infectious disease in a subject, comprising administering to the subject (II).

TECH

BIOTECHNOLOGY - Preferred Method: In (M1) the bacterium is an intracellular bacterium selected from *M. tuberculosis*, *M. bovis*, *M. bovis* strain BCG, BCG substrains, *M. avium*, *M. intracellulare*, *M. africanum*, *M. kansasii*, *M. marinum*, *M. ulcerans*, *M. avium* subspecies *paratuberculosis*, *Nocardia asteroides*, other *Nocardia* species, *Legionella pneumophila*, other *Legionella* species, *Salmonella typhi*, other *Salmonella* species, *Shigella* species, *Yersinia pestis*, *Pasteurella haemolytica*, *Pasteurella multocida*, other *Pasteurella* species, *Actinobacillus pleuropneumoniae*, *Listeria monocytogenes*, *Listeria ivanovii*, *Brucella abortus*, other *Brucella* species, *Chlamydia pneumoniae*, *Chlamydia trachomatis*, *Chlamydia psittaci* and *Coxiella burnetii*. The bacterium is not *Yersinia enterocolitica*, but preferably a strain of *M. tuberculosis*, *M. bovis*. The bacterium can preferably be BCG. The enzyme is selected from iron-manganese superoxide dismutase, zinc-copper superoxide dismutase, thioredoxin, thioredoxin reductase, glutathione reductase (glutaredoxin), glutamine synthetase, other thioredoxin-like proteins, other thioredoxin reductase-like proteins, other glutaredoxin-like proteins, other thiol reductases and other protein disulfide oxidoreductases. The bacterium is *Salmonella* and the enzyme is not superoxide dismutase or glutamine synthetase, but a copper, zinc superoxide dismutase and the bacteria is not *M. tuberculosis*, *L. pneumophila*, *A. pleuropneumoniae* or *B. abortus*. The enzyme activity is reduced but is still present. Reducing the activity of the anti-apoptotic enzyme comprises transforming the bacterium with an anti-sense nucleic acid that reduces the production of the anti-apoptotic enzyme. Modifying a bacterium that retains or increases immunogenicity but loses or reduces pathogenicity in a subject further comprises:

(a) identifying an enzyme that is essential for the full expression of in vivo survival of the bacterium;

(b) mutating a gene encoding the essential bacterial enzyme or obtaining from another species a homologous gene;

(c) replacing in the bacterium the gene encoding the essential bacterial enzyme with one or more of the mutated genes or homologous genes from (b), to reducing but not eliminate in the bacterium the activity of the essential enzyme identified in (a); and

(d) identifying an attenuated bacterium of (c) that survives to confer protective immunity in vivo.

The bacterium modified is already ~~attenuated~~ and virulent. This bacterium can be selected from *M. tuberculosis*, *M. bovis*, *M. bovis* strain BCG, BCG substrains, *M. avium*, *M. intracellulare*, *M. africanum*, *M. kansasii*, *M. marinum*, *M. ulcerans*, *M. avium* subspecies *paratuberculosis*, *Nocardia asteroides*, other *Nocardia* species, *Legionella pneumophila*, other *Legionella* species, *Salmonella typhi*, other *Salmonella* species, *Shigella* species, *Yersinia pestis*, *Pasteurella haemolytica*, *Pasteurella multocida*, other *Pasteurella* species, *Actinobacillus pleuropneumoniae*, *Listeria monocytogenes*, *Listeria ivanovii*, *Brucella abortus*, other *Brucella* species, *Cowdria ruminantium*, *Chlamydia pneumoniae*, *Chlamydia trachomatis*, *Chlamydia psittaci*, *Coxiella burnetii*, other *Rickettsial* species, *Ehrlichia* species, *Staphylococcus aureus*, *Staphylococcus*

epidermidis, *Streptococcus pyogenes*, *Streptococcus agalactiae*, *Bacillus anthracis*, *Escherichia coli*, *Vibrio cholerae*, *Campylobacter* species, *Neisseria meningitidis*, *Neisseria gonorrhea*, *Pseudomonas aeruginosa*, other *Pseudomonas* species, *Haemophilus influenzae*, *Haemophilus ducreyi*, other *Haemophilus* species, *Yersinia enterocolitica*, and other *Yersinia* species. The enzyme is selected from iron-manganese superoxide dismutase, zinc-copper superoxide dismutase, thioredoxin, thioredoxin reductase, glutathione reductase (glutaredoxin), glutamine synthetase, other thioredoxin-like proteins, other thioredoxin reductase-like proteins, other glutaredoxin-like proteins, other thiol reductases, other protein disulfide oxidoreductases, catalase, urease, and clpC ATPase, enzymes involved in basic cell metabolism and respiration pathways, enzymes involved in the biosynthesis of amino acids, purines, nucleic acids, lipids, and iron-scavenging molecules, oxidoreductases, oxygenases, dehydrogenases, phospholipases, lipases, esterases and proteases. The activity of the enzyme is reduced by reducing the amount of the enzyme produced by the bacterium or the efficiency of the enzyme. The amount of enzyme produced by the bacterium is reduced by altering a promoter in the bacterium to decrease expression of a nucleic acid that encodes the enzyme, or by replacing codons in a naturally occurring nucleic acid that encodes the enzyme with codons that reduce the efficiency of translation of the nucleic acid. Furthermore, the efficiency of the enzyme is reduced by altering a naturally occurring nucleic acid that encodes the enzyme, comprising deleting, inserting and/or substituting codons in the naturally occurring nucleic acid, wherein the nucleic acid with the deletion, insertion or substitution encodes an enzyme with reduced efficiency. The efficiency of the enzyme can also be reduced by substituting from another bacterial species a nucleic acid that encodes a less efficient analog or homolog of the enzyme for a naturally occurring nucleic acid, thereby reducing the efficiency of the enzyme. The activity of the enzyme is reduced by altering a localization of the enzyme. The altering of the localization of the enzyme comprises altering a leader peptide. In preventing an infectious disease in a subject, the disease is bacterial, preferably tuberculosis. Preventing an infectious disease in a subject and producing an immune response by an immune cell of the subject preferably comprises human mammalian subject.

Preferred Bacterium: The attenuated intracellular bacterium also comprises the characteristics of the modified bacterium cited above. The bacterium further comprises an enzyme, preferably superoxide dismutase, thioredoxin or thioredoxin reductase. The activity of both thioredoxin and thioredoxin reductase has been reduced. The bacterium modified by (M2) is a mutant *M. tuberculosis* in which:

- (a) glutamic acid is deleted at position 54 of superoxide dismutase;
- (b) glycine is deleted at position 88 of superoxide dismutase;
- (c) glycine is deleted at positions 87 and 88 of superoxide dismutase;
- (d) glycine is deleted at position 134 of superoxide dismutase;
- (e) proline is deleted at position 150 of superoxide dismutase;
- (f) valine is deleted at position 184 of superoxide dismutase;
- (g) lysine is substituted for histidine at position 28 of superoxide dismutase;
- (h) lysine is substituted for histidine at position 76 of superoxide dismutase;
- (i) lysine is substituted for histidine at position 145 of superoxide dismutase;
- (j) lysine is substituted for histidine at position 164 of superoxide dismutase.

Any of the bacterium comprises a nucleic acid encoding a heterologous antigen.

ACCESSION NUMBER: 2002-444150 [200247] WPIX
 DOC. NO. CPI: C2002-126453 [200247]
 TITLE: Composition comprising microbe having attenuating mutation that comprises insertion sequence containing recombinant transcription terminator, useful as vaccine, and for delivering a desired gene product to individual
 DERWENT CLASS: B04; C06; D16
 INVENTOR: CURTISS R; TINGE A; TINGE S A
 PATENT ASSIGNEE: (CURT-I) CURTISS R; (MEGA-N) MEGAN HEALTH INC; (TING-I) TINGE A; (TING-I) TINGE S A; (UNIW-C) UNIV WASHINGTON; (UYWA-N) UNIV WASHINGTON ST LOUIS
 COUNTRY COUNT: 96

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2002030457	A2	20020418	(200247)*	EN	91	[18]
AU 2002011582	A	20020422	(200254)	EN		
EP 1326960	A2	20030716	(200347)	EN		
EP 1326960	B1	20041208	(200480)	EN		
DE 60107707	E	20050113	(200506)	DE		
DE 60107707	T2	20051208	(200580)	DE		
AU 2002211582	A8	20051006	(200612)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002030457	A2	WO 2001-US31606	20011011
DE 60107707	E	DE 2001-60107707	20011011
DE 60107707	T2	DE 2001-60107707	20011011
EP 1326960	A2	EP 2001-979646	20011011
EP 1326960	B1	EP 2001-979646	20011011
DE 60107707	E	EP 2001-979646	20011011
DE 60107707	T2	EP 2001-979646	20011011
EP 1326960	A2	WO 2001-US31606	20011011
EP 1326960	B1	WO 2001-US31606	20011011
DE 60107707	E	WO 2001-US31606	20011011
DE 60107707	T2	WO 2001-US31606	20011011
AU 2002011582	A	AU 2002-11582	20011011
AU 2002211582	A8	AU 2002-211582	20011011

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 60107707	E	Based on EP 1326960 A
DE 60107707	T2	Based on EP 1326960 A
AU 2002011582	A	Based on WO 2002030457 A
EP 1326960	A2	Based on WO 2002030457 A
EP 1326960	B1	Based on WO 2002030457 A
DE 60107707	E	Based on WO 2002030457 A
DE 60107707	T2	Based on WO 2002030457 A
AU 2002211582	A8	Based on WO 2002030457 A

PRIORITY APPLN. INFO: US 2000-689123 20001012
 USE

USE - (I) is useful as a vaccine, where the vaccine comprises a microbe having an ~~attenuating~~ mutation comprising an insertion sequence

containing a rTT in a chromosomal gene, and the insertion sequence does not contain a recombinant promoter. (I) comprising a microbe having an attenuating mutation as described above in a chromosomal gene, and a recombinant gene encoding the desired gene product, is useful for delivering the desired gene product to an individual. The insertion sequence containing a rTT does not include a recombinant promoter. (I) is also useful for immunizing an individual against a pathogen, where (I) comprises a derivative of a pathogenic microbe having an attenuating mutation comprising an insertion sequence containing a recombinant transcription terminator in a chromosomal gene. The microbe further comprises a deletion mutation in the coding region of the chromosomal gene, in the promoter region of the gene, or in both the coding and promoter region of the gene. The microbe further comprises a recombinant gene which encodes an epitope from the pathogen such as a virus, bacterium, protozoan, parasite or fungus (all claimed). (I) is useful as recombinant vaccine for the control of bubonic plague caused by *Yersinia pestis*, of gonorrhea caused by *Neisseria gonorrhea*, of syphilis caused by *Treponema palladium*, and of venereal diseases as well as eye infections caused by *Chlamydia trachomatis*.

TECH

BIOTECHNOLOGY - Preferred Composition: (I) comprises a microbe (e.g., *Salmonella*, *Shigella*, *Escherichia* or their hybrid) having an attenuation mutation in a chromosomal gene such as *pab* gene, *pur* gene, *aro* gene, *asd*, *dap* gene, *nadA*, *pncB*, *galE*, *pmi*, *fur*, *rpsL*, *ompR*, *htrA*, *hemA*, *cdt*, *cya*, *crp*, *phoP*, *phoQ*, *rfc*, *poxR*, or *galU*, where the mutation comprises an insertion sequence containing a rTT such as *rrnB* 5s rRNA T1T2, *trpA*, T4gene32, T4ipIII gene, or *rrfG5SrRNA*. The rTT is preferably inserted in the *phoP* gene. The microbe further comprises a deletion mutation in the coding region of the gene, in the promoter region of the gene or in both the coding region and promoter region of the gene, and preferably consists of MGN-1362, *chi8298* or *chi8429*. The microbe in (I) further comprises a recombinant gene encoding a desired gene product. The recombinant gene encodes a gene product from a pathogen such as virus, bacterium, protozoan, parasite or fungus, a product capable of suppressing, modulating or augmenting an immune response in the individual, an autoantigen e.g., a gamete specific antigen, or an allergen.

ABEX

WIDER DISCLOSURE - Microbes having attenuating mutation comprising a transcription terminator, are also disclosed. The attenuated microbes can be used for vaccines and/or for delivery vehicles for a desired gene product. The microbes can thus serve as live attenuated vaccines capable of eliciting an immunogenic response and a protective immunity in the individual to which it is administered. Also the attenuated microbes can be used for the commercial production of recombinant proteins.

ADMINISTRATION - The vaccine is administered by oral injection, gastric intubation, or broncho-nasal-ocular spraying, or by intravenous, intramuscular, or intramammary injection. No specific clinical dosages are given.

EXAMPLE - The defined DELTAphoP24 mutation was designed to include insertion of a transcription terminator and this was introduced into *Salmonella typhimurium* SL1344 to produce strain MGN-1362. The DELTAphoP24 deletion was obtained using inverse polymerase chain reaction (PCR) with primers *phoP* 40-20 and *phoP* 815-839 based on the Miller et al., Proc.Natl.Acad.Sci.86:5054-5058, 1989 sequence of the *phoPQ* region to remove the entire coding region of *phoP* and 100 bp of upstream DNA from the *phoPQ* clone pEG-5381. Although this deletion removed all of the *phoP* coding region, the *phoQ* coding region was left intact. This PCR product was then digested with *Bgl*II and *Eco*RI to cut within the designed primers and provide compatible ends for ligation to the annealed *trpA* transcription germinator oligos. The ligation described resulted in the production of pMEG-359. The 3.1 kb *Eco*RV fragment of pMEG-359 was then

cloned into the SmaI site of the suicide vector, pMEG-149, to produce the DELTAphoP24 suicide plasmid pMEG-368. Deletion of the phoP region and insertion of the trpA transcription terminator was then confirmed by sequence analysis. Since pMEG-368 is a mobilizable suicide vector encoding for the selectable ampicillin resistance marker and the counter selectable marker, levansucrase, resulting in sensitivity to sucrose, the plasmid can be conjugated into any strain desired selecting for ampicillin resistance followed by counter-selection for the replacement of the wild-type phoP gene with the deltaphoP24 mutation in the presence of sucrose. The strain responsible for the delivery of pMEG-368 was obtained by electroporating pMEG-368 into the Pir⁺ Asd⁻ delivery host MGN-617 to produce MGN-617 (pMEG-368). The pMEG-368 suicide construct was then conjugationally transferred into the S.typhimurium SL1344 strain chi3339, followed by selection for ampicillin resistant isolates which grew without DAP (diaminopimelic acid). One of the isolates, MGN-1361, from this conjugation, representing the single integration of the DELTAphoP24 deletion plasmid into the chromosome to produce a duplication of the phoP region with both the wild-type phoP gene and the mutant DELTAphoP24 allele. MGN-1361 was then plated on Luria agar containing 5% sucrose to select for loss of the ampicillin-resistance suicide vector. The isolates obtained by this selection were then screened for acid phosphatase activity. The white phosphatase-negative colonies were then confirmed for the DELTAphoP24 phosphatase minus phenotype and stocked as MGN-1362. A strain MGN-617 (pMEG-368) was used to introduce the DELTAphoP24 mutation into a diversity of S.typhimurium, S.paratyphi A and S.typhi strains. In all cases the strains failed to express the non-specific acid phosphatase encoded by the phoN gene and using PCR analysis had approximately 730 base pairs (bp) of DNA less than in the phoPQ wild-type strain. This represented a deletion of 775 bp of the phoP gene and the insertion of 45 bp specifying the trpA transcription terminator.

L59 ANSWER 35 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2002-690113 [200274] WPIX
 CROSS REFERENCE: 2000-532863; 2002-557291; 2002-598710; 2002-635659;
 2002-635674
 DOC. NO. CPI: C2002-195008 [200274]
 TITLE: Immunogenic composition, useful to prevent or treat
 pathogenic bacterial infection, comprises live bacteria
 with DNA adenine methylase activity altered relative to
 wild-type, and which also express a heterologous antigen
 DERWENT CLASS: B04; D13; D16
 INVENTOR: HEITHOFF D M; LOW D A; MAHAN M J; SINSHEIMER R L
 PATENT ASSIGNEE: (HEIT-I) HEITHOFF D M; (LOWD-I) LOW D A; (MAHA-I) MAHAN M
 J; (SINS-I) SINSHEIMER R L
 COUNTRY COUNT: 1

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20020081317	A1	20020627	(200274)*	EN	44	[9]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20020081317	A1	Provisional	US 1999-183043P 19990202
US 20020081317	A1	Provisional	US 1999-198250P 19990505
US 20020081317	A1	CIP of	US 2000-495614 20000201
US 20020081317	A1	CIP of	US 2000-612116 20000707

US 20020081317 A1

US 2001-927788 20010809

PRIORITY APPLN. INFO: US 2001-927788 20010809
 US 1999-183043P 19990202
 US 1999-198250P 19990505
 US 2000-495614 20000201
 US 2000-612116 20000707

ACTN MECHANISM OF ACTION - Vaccine.

The ability of Dam- and Dam overproducing Salmonella to elicit cross-protection was tested. BALB/c mice were immunized with 1x10⁹ Dam- or Dam overproducing Salmonella administered orally. Mice were challenged with the virulent Salmonella serotype eleven weeks post-immunization, which was six weeks after the vaccine strains were cleared from murine tissues, including Peyer's patches, mesenteric lymph nodes, liver, and spleen. The results showed that mice were protected against a heterologous challenge eleven weeks post immunization. Immunization with Dam-S.enteritidis conferred cross-protection against challenge with 10⁹ S.typhimurium and 10⁹ S.dublin after five weeks and conferred cross-protection for even longer periods. One third of mice vaccinated with a single oral dose of Dam S.enteritidis survived a virulent heterologous challenge eleven weeks post-immunization of 10⁴ above the lethal dose required to kill 50% of the animals against strains S.dublin and S.typhimurium, comparable to the level of survival observed upon homologous challenge. To test whether Dam overproducing strains elicited protective immune responses to homologous and heterologous Salmonella serotypes similar to Dam strains, mice were immunized with Dam-overproducing S.typhimurium. 75% of immunized mice survived a challenge dose of 1000-fold above the LD₅₀ of S.dublin and S.typhimurium. Taken together, these studies indicated that Salmonella strains that under- or over-produced Dam were highly attenuated and served as protective live vaccines against homologous and at least some heterologous serotypes.

USE

USE - (I) is useful for eliciting an immune response in an individual, and for treating or preventing pathogenic bacterial, viral, fungal, parasitic and vector borne infections (all claimed), especially Salmonella infections.

TECH

BIOTECHNOLOGY - Preferred Composition: In (I), the Dam activity is altered by an artificially engineered change in the pathogenic bacteria's genome, or by a second heterologous nucleotide sequence. The first heterologous sequence is operatively inserted into a first or second expression cassette, and the second heterologous sequence is operatively inserted into a second expression cassette. The genetically engineered change is a non-lethal, non-reverting mutation which renders the bacteria attenuated. The heterologous antigen is an antigen of a pathogenic virus or bacteria. The heterologous antigen is mammalian tumor antigen, mammalian immune disease antigen, or an antigen of a microorganism which causes an enteric, respiratory, fungal, parasitic, or vector borne infection, or a sexually transmitted disease, a herpes virus infection or a hepatitis virus infection. The microorganism which causes the enteric infection is a bacteria selected from Enterotoxigenic Escherichia coli, Helicobacter pylori, Neisseria meningitis, Salmonella (non typhoidal), S.typhi, Shiga toxin producing E.coli, Shigella spp., and Vibrio cholera, or a virus selected from Astrovirus, Cocksackievirus, Echovirus, Norwalk virus, Poliovirus, and Rotavirus. The microorganism which causes the respiratory infection is a virus selected from influenza virus, Measles virus, Parainfluenza virus, Paramyxovirus, Respiratory syncytial virus, Rhinovirus, and Rubella virus, or a bacteria selected from Bordetella pertussis, Chlamydia pneumoniae, Haemophilus influenzae B, NT H.influenzae, Moraxella catarrhalis, Mycobacterium tuberculosis, and

Mycoplasma pneumoniae. The microorganism which causes the sexually transmitted disease is a virus selected from HIV and human papillomavirus or a bacteria selected from *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and *Treponema pallidum*. The microorganism which causes the herpes virus infection is selected from Cytomegalovirus, Epstein-Barr virus, Herpes simplex II, and Varicella zoster virus. The microorganism which causes the hepatitis virus infection is selected from Hepatitis A, Hepatitis B, Hepatitis C, Hepatitis D, Hepatitis E and Hepatitis G. The microorganism which causes the fungal infection is a fungi selected from *Aspergillus fumigatus*, *Blastomyces dermatitidis*, *Candida* spp., *Coccidioides immitis*, *Cryptococcus neoformans*, *Histoplasma capsulatum* and *Paracoccidioides brasiliensis*. The microorganism which causes the parasitic infection is selected from *Ascaris lumbricoides*, *Entamoeba histolytica*, *Enterobius vermicularis*, *Giardia lamblia*, *Mycobacterium leprae*, *Plasmodium* spp., *Schistosoma* spp., *Taenia*, *Toxoplasma gondii*, and *Trichomoniasis vaginalis*. The microorganism which causes the vector borne infection is selected from Arbovirus, *Bacillus anthracis*, *Borrelia burgdorferi*, Dengue viruses, Japanese encephalitis virus and Rabies virus. Preparation: (I) was prepared by standard recombinant techniques.

L59 ANSWER 36 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-431310 [200037] WPIX
 TITLE: Vaccination against diseases caused by Chlamydia
 infection involves initial administration of attenuated
 bacteria containing nucleic acid encoding Chlamydia
 protein, followed by administration of Chlamydia protein
 DERWENT CLASS: B04; D16
 INVENTOR: BRUNHAM R; BRUNHAM R C; MURDIN A; MURDIN A D; BRUNHAM C;
 MURDIN D
 PATENT ASSIGNEE: (AVET-C) AVENTIS PASTEUR LTD; (SNFI-C) SANOFI PASTEUR
 LTD; (UMNB-C) UNIV MANITOBA; (BRUN-I) BRUNHAM R C;
 (MURD-I) MURDIN A D; (SNFI-C) CONNAUGHT LAB LTD
 COUNTRY COUNT: 89

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000034498	A1	20000615	(200037)*	EN	32	[5]
AU 2000015407	A	20000626	(200045)	EN		
EP 1169465	A1	20020109	(200205)	EN		
US 20020168382	A1	20021114	(200277)	EN		
JP 2002531135	T	20020924	(200278)	JA	35	
NZ 512730	A	20031219	(200404)	EN		
US 6676949	B2	20040113	(200405)	EN		
US 20040126382	A1	20040701	(200444)	EN		
US 20040131630	A1	20040708	(200445)	EN		
AU 772356	B2	20040422	(200457)	EN		
MX 2001005615	A1	20040901	(200553)	ES		
EP 1169465	B1	20060301	(200617)	EN		
US 7026300	B2	20060411	(200626)	EN		
DE 69930147	E	20060427	(200629)	DE		
DE 69930147	T2	20070111	(200707)	DE		
US 20080095804	A1	20080424	(200830)	EN		
US 20090215151	A1	20090827	(200957)	EN		
MX 264056	B	20090123	(200961)	ES		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
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WO 2000034498 A1	WO 1999-CA1151 19991202
US 20020168382 A1 Provisional	US 1998-110855P 19981204
US 6676949 B2 Provisional	US 1998-110855P 19981204
US 20040126382 A1 Provisional	US 1998-110855P 19981204
US 20040131630 A1 Provisional	US 1998-110855P 19981204
US 7026300 B2 Provisional	US 1998-110855P 19981204
US 20080095804 A1 Provisional	US 1998-110855P 19981204
US 20090215151 A1 Provisional	US 1998-110855P 19981204
DE 69930147 E	DE 1999-69930147 19991202
DE 69930147 T2	DE 1999-69930147 19991202
EP 1169465 A1	EP 1999-957789 19991202
EP 1169465 B1	EP 1999-957789 19991202
DE 69930147 E	EP 1999-957789 19991202
DE 69930147 T2	EP 1999-957789 19991202
NZ 512730 A	NZ 1999-512730 19991202
EP 1169465 A1	WO 1999-CA1151 19991202
JP 2002531135 T	WO 1999-CA1151 19991202
NZ 512730 A	WO 1999-CA1151 19991202
MX 2001005615 A1	WO 1999-CA1151 19991202
EP 1169465 B1	WO 1999-CA1151 19991202
DE 69930147 E	WO 1999-CA1151 19991202
DE 69930147 T2	WO 1999-CA1151 19991202
US 20080095804 A1 Cont of	WO 1999-CA1151 19991202
US 20020168382 A1	US 1999-453289 19991203
US 6676949 B2	US 1999-453289 19991203
US 20040126382 A1 Div Ex	US 1999-453289 19991203
US 20040131630 A1 Div Ex	US 1999-453289 19991203
US 7026300 B2 Div Ex	US 1999-453289 19991203
US 20090215151 A1 Div Ex	US 1999-453289 19991203
AU 2000015407 A	AU 2000-15407 19991202
AU 772356 B2	AU 2000-15407 19991202
JP 2002531135 T	JP 2000-586931 19991202
MX 2001005615 A1	MX 2001-5615 20010604
US 20080095804 A1 Cont of	US 2001-857305 20011003
US 20040131630 A1	US 2003-699683 20031104
US 20090215151 A1 Cont of	US 2003-699683 20031104
US 20040126382 A1	US 2003-699882 20031104
US 7026300 B2	US 2003-699882 20031104
US 20090215151 A1 Cont of	US 2007-976215 20071023
US 20080095804 A1	US 2007-683 20071217
US 20090215151 A1	US 2009-402568 20090312
MX 264056 B PCT Application	WO 1999-CA1151 19991202
MX 264056 B	MX 2001-5615 20010604

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 772356 B2	Previous Publ	AU 2000015407 A
DE 69930147 E	Based on	EP 1169465 A
DE 69930147 T2	Based on	EP 1169465 A
US 20040126382 A1	Div ex	US 6676949 B
US 20040131630 A1	Div ex	US 6676949 B
US 7026300 B2	Div ex	US 6676949 B
US 20090215151 A1	Div Ex	US 6676949 B
AU 2000015407 A	Based on	WO 2000034498 A
EP 1169465 A1	Based on	WO 2000034498 A
JP 2002531135 T	Based on	WO 2000034498 A
NZ 512730 A	Based on	WO 2000034498 A

AU 772356 B2	Based on	WO 2000034498 A
MX 2001005615 A1	Based on	WO 2000034498 A
EP 1169465 B1	Based on	WO 2000034498 A
DE 69930147 E	Based on	WO 2000034498 A
DE 69930147 T2	Based on	WO 2000034498 A
MX 264056 B	Based on	WO 2000034498 A

PRIORITY APPLN. INFO: US 1998-110855P 19981204
 WO 1999-CA1151 19991202
 US 1999-453289 19991203
 US 2001-857305 20011003
 US 2003-699683 20031104
 US 2003-699882 20031104
 US 2007-976215 20071023
 US 2007-683 20071217
 US 2009-402568 20090312

NOV NOVELTY - ~~Immunizing~~ (I) a host against infection caused by a strain of Chlamydia, comprises administration of an attenuated bacteria harboring a nucleic acid molecule (II) encoding an ~~immunoprotection~~-inducing Chlamydia protein followed by administration of purified Chlamydia protein or its fragment, which generates a Chlamydia protein specific ~~immune~~ response in the host.

ACTN MECHANISM OF ACTION - Vaccine.

Salmonella typhimurium strain 22-4 was transfected with MOMP gene containing plasmid, pcDNA3/MOMP by electroporation and cultured. Groups of Balb/c mice were immunized with 105-1010 CFU of ~~attenuated~~ strains of Salmonella. Four inoculation at two week intervals were administered. A single protein boost with 1 micrograms Chlamydia trachomatis mouse pneumonitis strain (MoPn) MOMP embedded in ISCOM was given intramuscularly at the time of forth immunization. Mice were challenged with 5000 IU MoPn B intranasally two weeks after the last immunization and were sacrificed at day 10 post infection. The mice were found to be effectively protected where protein index = 4.1, against MoPn lung infection.

TECH

BIOTECHNOLOGY - Preferred Protein: The immunoprotection-inducing Chlamydia protein or fragment is a major outer membrane protein (MOMP) of Chlamydia strain, preferably Chlamydia pneumoniae or Chlamydia trachomatis. The protein used in subsequent administration is administered by incorporating into an immunostimulating complex (ISCOM). The ~~attenuated~~ bacteria is an ~~attenuated~~ strain of Salmonella typhimurium. Preferred Nucleic Acid: (II) encoding MOMP is provided in a plasmid vector comprising a promoter sequence, preferably cytomegalovirus promoter operably coupled to the nucleic acid for expression of Chlamydia protein in a host. The plasmid vector has the identifying characteristics of pcDNA3/MOMP as given in the specification. Preparation: Chlamydia protein can be produced recombinantly or can be extracted from a Chlamydia extract.

L59 ANSWER 37 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-256988 [200022] WPIX
 DOC. NO. CPI: C2000-078557 [200022]
 TITLE: Attenuated gram-negative Salmonella cells, comprising inactivated genes in the SPI2 locus and useful for vaccinating against a range of disorders associated with microbial infections such as stomach and cervical cancers
 DERWENT CLASS: B04; D16
 INVENTOR: APFEL H; GUZMAN C; GUZMAN C A; GUZM N C A; HENSEL M; HOLDEN D W; HUECK C; MEDINA E; SHEA J E; HOLDEN D W D
 PATENT ASSIGNEE: (UNLO-C) IMPERIAL COLLEGE INNOVATIONS LTD; (CREA-N) CREATOGEN AG; (CREA-N) CREATOGEN BIOSCIENCES GMBH;

10/563,199

December 13, 2010

(MICR-N) MICROSCIENCE LTD; (EMER-N) EMERGENT PROD DEV UK
LTD

COUNTRY COUNT: 87

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000014240	A2	20000316	(200022)	*	EN	147[20]
AU 9958605	A	20000327	(200032)		EN	
EP 1108034	A2	20010620	(200135)		EN	
BR 9914479	A	20010626	(200140)		PT	
JP 2002524077	T	20020806	(200266)	JA	181	
US 20040203039	A1	20041014	(200469)		EN	
US 6936425	B1	20050830	(200557)		EN	
US 20080075739	A1	20080327	(200825)		EN	
EP 1108034	B1	20080806	(200854)		EN	
DE 69939264	E	20080918	(200862)		DE	
EP 1970449	A1	20080917	(200862)		EN	
US 7700104	B2	20100420	(201027)		EN	
EP 1970449	B1	20101103	(201072)		EN	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000014240	A2	WO 1999-EP6514	19990903
AU 9958605	A	AU 1999-58605	19990903
BR 9914479	A	BR 1999-14479	19990903
DE 69939264	E	DE 1999-69939264	19990903
EP 1108034	A2	EP 1999-946122	19990903
EP 1108034	B1	EP 1999-946122	19990903
DE 69939264	E	EP 1999-946122	19990903
EP 1970449	A1 Div Ex	EP 1999-946122	19990903
US 7700104	B2 Div Ex	US 1999-763620	19990903
EP 1108034	A2 PCT Application	WO 1999-EP6514	19990903
BR 9914479	A PCT Application	WO 1999-EP6514	19990903
JP 2002524077	T PCT Application	WO 1999-EP6514	19990903
US 20040203039	A1 Div Ex	WO 1999-EP6514	19990903
US 6936425	B1 PCT Application	WO 1999-EP6514	19990903
US 20080075739	A1 Div Ex	WO 1999-EP6514	19990903
EP 1108034	B1 PCT Application	WO 1999-EP6514	19990903
DE 69939264	E PCT Application	WO 1999-EP6514	19990903
US 7700104	B2 Div Ex	WO 1999-EP6514	19990903
JP 2002524077	T	JP 2000-568983	19990903
US 20040203039	A1 Div Ex	US 2001-763620	20010302
US 20080075739	A1 Div Ex	US 2001-763620	20010302
US 6936425	B1	US 2002-763620	20020301
US 20040203039	A1	US 2004-763883	20040123
US 20080075739	A1 Cont of	US 2004-763883	20040123
US 7700104	B2	US 2004-763883	20040123
US 20080075739	A1	US 2007-840928	20070817
EP 1970449	A1	EP 2008-75560	19990903
EP 1108034	B1 Related to	EP 2008-75560	20080619
EP 1970449	B1 Div Ex	EP 1999-946122	19990903
EP 1970449	B1	EP 2008-75560	19990903

FILING DETAILS:

PATENT NO	KIND	PATENT NO
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DE 69939264 E	Based on	EP 1108034 A
EP 1970449 A1	Div ex	EP 1108034 A
US 20080075739 A1	Div ex	US 6936425 B
US 7700104 B2	Div Ex	US 6936425 B
AU 9958605 A	Based on	WO 2000014240 A
EP 1108034 A2	Based on	WO 2000014240 A
BR 9914479 A	Based on	WO 2000014240 A
JP 2002524077 T	Based on	WO 2000014240 A
US 6936425 B1	Based on	WO 2000014240 A
EP 1108034 B1	Based on	WO 2000014240 A
DE 69939264 E	Based on	WO 2000014240 A
EP 1970449 B1	Div Ex	EP 1108034 A

PRIORITY APPLN. INFO: EP 1998-116827 19980904
 ACTN MECHANISM OF ACTION - Vaccine.

The presence of beta-galactosidase (beta-gal) (which acted as an antigen) specific antibodies in intestinal washes from mice immunized with MvP101 or MvP103 (sseC::aphT and sseD::aphT mutant Salmonella typhimurium strains) carrying pAH97 was investigated 52 days after immunization. It was found that both carriers stimulated the production of significant amounts of beta-gal-specific immunoglobulin (Ig) A and to a lesser extent, favored the transudation of antigen-specific IgG in the intestinal lumen. Immunization with MvP103/pAH97 resulted in 4% of the total Ig obtained from intestinal lavages being IgA specific for beta-gal and 0.25% of the Ig was IgB specific for beta-gal. Immunization with MvP101/pAH97 resulted in 4.25% of the total Ig obtained from intestinal lavages being IgA specific for beta-gal and 1% of the Ig was IgB specific for beta-gal. No significant differences were observed among the mucosal responses to the different recombinant clones.

USE

USE - The attenuate cells are used as carriers for presenting bacterial, viral or tumor antigens to a host and are capable of expressing the nucleic acid molecules in a target cell, especially a macrophage (claimed). Therefore, the cells may be used for the preparation of a prophylactic or therapeutic composition for the treatment of a chronic disease caused by a bacterium or virus (claimed). Preferably, the disease is either a Salmonella infection or a tumor. The cells may therefore be used to vaccinate against a range of bacterial and viral pathogens such as Helicobacter pylori (directly associated with stomach cancer), Chlamydia pneumoniae (associated with arteriosclerosis and Alzheimer's disease), Borrelia burgdorferi, Nanobacteria (found in the chronically diseased kidneys of patients with crystalline deposits), Hepatitis virus (causative agent of Hepatitis B and C and associated with liver cancer), Human papilloma virus (HPV) (associated with cervical cancer) or Hepes virus (claimed). The nucleic acids may also be used for the detection of in vivo inducible promoters.

L59 ANSWER 38 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-195303 [200017] WPIX
 TITLE: Chlamydia pneumoniae antigens used for immunization and protection against Chlamydia diseases
 DERWENT CLASS: B04; D16; S03
 INVENTOR: DUNN P L; MURDIN A D; OOMEN R P
 PATENT ASSIGNEE: (AVET-C) AVENTIS PASTEUR LTD; (SNFI-C) CONNAUGHT LAB LTD
 COUNTRY COUNT: 85

PATENT INFO ABBR.:

PATENT NO	KIND DATE	WEEK	LA PG	MAIN IPC
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WO 2000006743	A2	20000210	(200017)*	EN	52[4]
AU 9947934	A	20000221	(200029)	EN	
EP 1108033	A2	20010620	(200135)	EN	
JP 2002524035	T	20020806	(200266)	JA	72
MX 2001001090	A1	20020601	(200365)	ES	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006743	A2	WO 1999-IB1333	19990727
AU 9947934	A	AU 1999-47934	19990727
EP 1108033	A2	EP 1999-931399	19990727
EP 1108033	A2	WO 1999-IB1333	19990727
JP 2002524035	T	WO 1999-IB1333	19990727
MX 2001001090	A1	WO 1999-IB1333	19990727
JP 2002524035	T	JP 2000-562525	19990727
MX 2001001090	A1	MX 2001-1090	20010129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9947934	A	Based on WO 2000006743 A
EP 1108033	A2	Based on WO 2000006743 A
JP 2002524035	T	Based on WO 2000006743 A
MX 2001001090	A1	Based on WO 2000006743 A

PRIORITY APPLN. INFO: US 1999-360434 19990726
 US 1999-122045P 19990301
 US 1998-94203P 19980727

DETD DETAILED DESCRIPTION - An isolated polynucleotide (I), is new, and is selected from:

- (a) a 961 bp sequence given in the specification;
- (b) a polynucleotide encoding a polypeptide which is at least 75% homologous to a 265 amino acid sequence given in the specification; and
- (c) a polynucleotide capable of hybridizing under stringent conditions to the 961 bp sequence given in the specification.

INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated polypeptide that is at least 75% homologous to the 237 amino acid sequence given in the specification;
- (2) an expression cassette, comprising (I) operably linked to a promoter;
- (3) an expression vector comprising the expression cassette of (2);
- (4) a host cell comprising the expression cassette of (2);
- (5) a method for producing a recombinant CPN100314 polypeptide, comprising culturing the host cell of (4);
- (6) a vaccine vector, comprising the expression cassette of (2);
- (7) a pharmaceutical composition, comprising the vaccine vector of (6);
- (8) a pharmaceutical composition, comprising the polypeptide of (1), and further comprising one or more known Chlamydia antigens;
- (9) a method for inducing an immune response in a mammal, comprising administering to the mammal an immunologically effective amount of the vaccine vector of (6) or the pharmaceutical composition of (8);
- (10) a polynucleotide probe reagent (especially a DNA primer) capable of detecting the presence of Chlamydia in biological material, comprising a polynucleotide that hybridizes to (I) under stringent conditions;

(11) a hybridization method for detecting the presence of Chlamydia in a sample, comprising obtaining polynucleotide from the sample, hybridizing the polynucleotide with the probe of (10) and (c) detecting hybridization;

(12) an amplification method for detecting the presence of Chlamydia in a sample, comprising obtaining polynucleotide from the sample, amplifying the polynucleotide using one or more of the reagent probes of (10) and (c) detecting the amplified polynucleotide;

(13) a method for detecting the presence of Chlamydia in a sample, comprising contacting the sample with a detecting reagent (especially an antibody) that binds to CPN100314 polypeptide to form a complex;

(14) an affinity chromatography method for purifying a CPN100314 polypeptide, comprising contacting a sample containing a CPN100314 polypeptide with a detecting reagent (especially an antibody) that binds to CPN100314 polypeptide to form a complex, isolating the formed complex, dissociating the formed complex and isolating the dissociated CPN100314 polypeptide; and

(15) an antibody that immunospecifically binds the polypeptide of (1).

USE

USE - The *Chlamydia pneumoniae* polynucleotides and polypeptides can be used in vaccination methods for preventing and treating Chlamydia infection (e.g. infections caused by *C. trachomatis*, *C. psittaci*, *C. pneumoniae* or *C. pecorum*). The polynucleotides can be used to produce the polypeptides recombinantly, in the construction of vaccine vectors, as a vaccine agent, and in the construction of an ~~attenuated~~ Chlamydia strain. The polypeptides are also useful as vaccine agents, and for the preparation of medicaments for treating or preventing Chlamydia infection, e.g. community acquired pneumonia, and upper respiratory tract infections such as bronchitis and sinusitis.

L59 ANSWER 39 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-205466 [200018] WPIX
 TITLE: Chlamydia pneumoniae antigens used for immunization and protection against Chlamydia diseases
 DERWENT CLASS: B04; D16; S03
 INVENTOR: DUNN P L; MURDIN A D; OOMEN R P
 PATENT ASSIGNEE: (AVET-C) AVENTIS PASTEUR LTD; (SNFI-C) CONNAUGHT LAB LTD
 COUNTRY COUNT: 85

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000006742	A2	20000210	(200018)*	EN	48[2]	
AU 9947932	A	20000221	(200029)	EN		
EP 1105488	A2	20010613	(200134)	EN		
JP 2002525028	T	20020813	(200267)	JA	65	
US 20020150591	A1	20021017	(200275)	EN		
MX 2001001092	A1	20020601	(200365)	ES		
US 6660275	B2	20031209	(200381)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006742	A2	WO 1999-IB1331	19990727
US 20020150591	A1 Provisional	US 1998-94195P	19980727
US 6660275	B2 Provisional	US 1998-94195P	19980727
US 20020150591	A1	US 1999-361443	19990726

US 6660275 B2	US 1999-361443 19990726
AU 9947932 A	AU 1999-47932 19990727
EP 1105488 A2	EP 1999-931397 19990727
EP 1105488 A2	WO 1999-IB1331 19990727
JP 2002525028 T	WO 1999-IB1331 19990727
MX 2001001092 A1	WO 1999-IB1331 19990727
JP 2002525028 T	JP 2000-562524 19990727
MX 2001001092 A1	MX 2001-1092 20010129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9947932 A	Based on	WO 2000006742 A
EP 1105488 A2	Based on	WO 2000006742 A
JP 2002525028 T	Based on	WO 2000006742 A
MX 2001001092 A1	Based on	WO 2000006742 A

PRIORITY APPLN. INFO: US 1999-361443 19990726
 US 1998-94195P 19980727

DETD DETAILED DESCRIPTION - Chlamydia pneumoniae antigen polynucleotides (I) are selected from:

- (a) a defined 1401 bp sequence encoding a 467 amino acid protein (given in the specification); and
 - (b) a polynucleotide capable of hybridizing under stringent conditions to the 1401 bp sequence.
- INDEPENDENT CLAIMS are also included for the following:
- (1) an isolated polypeptide that is at least 75% homologous to the 450 amino acid sequence given in the specification;
 - (2) an expression cassette, comprising (I) operably linked to a promoter;
 - (3) an expression vector comprising the expression cassette of (2);
 - (4) a host cell comprising the expression cassette of (2);
 - (5) a method for producing a recombinant CPN100605 polypeptide, comprising culturing the host cell of (4);
 - (6) a vaccine vector, comprising the expression cassette of (2);
 - (7) a pharmaceutical composition, comprising the vaccine vector of (6);
 - (8) a pharmaceutical composition, comprising an immunologically effective amount of the polypeptide of (1), and further comprising one or more known Chlamydia antigens;
 - (9) a method for inducing an immune response in a mammal, comprising administering the vaccine vector of (6) or the pharmaceutical composition of (8);
 - (10) a polynucleotide probe reagent (especially a DNA primer) capable of detecting the presence of Chlamydia in biological material, comprising a polynucleotide that hybridizes to (I) under stringent conditions;
 - (11) a hybridization method for detecting the presence of Chlamydia in a sample, comprising:
 - (a) obtaining a polynucleotide from the sample;
 - (b) hybridizing the polynucleotide with the probe of (10); and
 - (c) detecting hybridization;
 - (12) an amplification method for detecting the presence of Chlamydia in a sample, comprising obtaining polynucleotide from the sample, amplifying the polynucleotide using one or more of the reagent probes of (10) and detecting the amplified polynucleotide;
 - (13) a method for detecting the presence of Chlamydia in a sample, comprising contacting the sample with a detecting reagent (especially an antibody) that binds to CPN100605 polypeptide to form a complex, and detecting the formed complex;

(14) an affinity chromatography method for purifying a CPN100605 polypeptide, comprising contacting a sample containing a CPN100605 polypeptide with a detecting reagent (especially an antibody) that binds to CPN100605 polypeptide to form a complex, isolating the formed complex, dissociating the formed complex, and isolating the dissociated CPN100605 polypeptide; and

(15) an antibody that immunospecifically binds the polypeptide of (1).

USE

USE - The *Chlamydia pneumoniae* polynucleotides and polypeptides can be used in vaccination methods for preventing and treating Chlamydia infection (e.g. infections caused by *C. trachomatis*, *C. psittaci*, *C. pneumoniae* or *C. pecorum*). The polynucleotides can be used to produce the polypeptides recombinantly, in the construction of vaccine vectors, as a vaccine agent, and in the construction of an attenuated Chlamydia strain. The polypeptides are also useful as vaccine agents, and for the preparation of medicaments for treating or preventing Chlamydia infection, e.g. community acquired pneumonia, and upper respiratory tract infections such as bronchitis and sinusitis.

L59 ANSWER 40 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-205465 [200018] WPIX
 TITLE: Novel Chlamydia pneumoniae antigens used for immunization and protection against Chlamydia diseases
 DERWENT CLASS: B04; D16; S03
 INVENTOR: MURDIN A D; OOMEN R P
 PATENT ASSIGNEE: (AVET-C) AVENTIS PASTEUR LTD; (SNFI-C) CONNAUGHT LAB LTD
 COUNTRY COUNT: 85

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000006740	A1	20000210	(200018)*	EN	51	[2]
AU 9947930	A	20000221	(200029)	EN		
EP 1100918	A1	20010523	(200130)	EN		
JP 2002524034	T	20020806	(200266)	JA	63	
US 20030147924	A1	20030807	(200358)	EN		
MX 2001001088	A1	20020601	(200365)	ES		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006740	A1	WO 1999-IB1329	19990727
US 20030147924	A1 Provisional	US 1998-94191P	19980727
US 20030147924	A1	US 1999-361040	19990726
AU 9947930	A	AU 1999-47930	19990727
EP 1100918	A1	EP 1999-931395	19990727
EP 1100918	A1	WO 1999-IB1329	19990727
JP 2002524034	T	WO 1999-IB1329	19990727
MX 2001001088	A1	WO 1999-IB1329	19990727
JP 2002524034	T	JP 2000-562522	19990727
MX 2001001088	A1	MX 2001-1088	20010129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9947930	A	WO 2000006740
	Based on	A

EP 1100918 A1	Based on	WO 2000006740 A
JP 2002524034 T	Based on	WO 2000006740 A
MX 2001001088 A1	Based on	WO 2000006740 A

PRIORITY APPLN. INFO: US 1999-361040 19990726
 US 1998-94191P 19980727

DETD DETAILED DESCRIPTION - An isolated polynucleotide (I), is new, and is selected from:

(a) the 1600 bp sequence given in the specification, and functional fragments thereof;

(b) a polynucleotide encoding a polypeptide which is at least 75% homologous to the 459 amino acid sequence given in the specification, and functional fragments thereof;

(c) a polynucleotide capable of hybridizing under stringent conditions to the 1600 bp sequence given in the specification, and functional fragments thereof.

INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polypeptide that is at least 75% homologous to the 421 amino acid sequence given in the specification, and functional fragment thereof;

(2) an expression cassette, comprising (I) operably linked to a promoter;

(3) an expression vector comprising the expression cassette of (2);

(4) a host cell comprising the expression cassette of (2);

(5) a method for producing a recombinant CPN100149 polypeptide, comprising culturing the host cell of (4) under conditions that allow the expression of the polypeptide; and recovering the recombinant polypeptide;

(6) a vaccine vector, comprising the expression cassette of (2);

(7) a pharmaceutical composition, comprising an immunologically effective amount of the vaccine vector of (6);

(8) a pharmaceutical composition, comprising an immunologically effective amount of the polypeptide of (1), and further comprising an adjuvant, and further comprising one or more known Chlamydia antigens;

(9) a method for inducing an immune response in a mammal, comprising administering to the mammal an immunologically effective amount of the vaccine vector of (6) OR the pharmaceutical composition of (8), wherein the administration induces an immune response;

(10) a polynucleotide probe reagent (especially a DNA primer) capable of detecting the presence of Chlamydia in biological material, comprising a polynucleotide that hybridizes to (I) under stringent conditions;

(11) a hybridization method for detecting the presence of Chlamydia in a sample, comprising:

(a) obtaining polynucleotide from the sample;

(b) hybridizing the polynucleotide with the probe of (10) under hybridization conditions; and

(c) detecting hybridization of the probe to the polynucleotide;

(12) an amplification method for detecting the presence of Chlamydia in a sample, comprising:

(a) obtaining polynucleotide from the sample;

(b) amplifying the polynucleotide using one or more of the reagent probes of (10); and

(c) detecting the amplified polynucleotide;

(13) a method for detecting the presence of Chlamydia in a sample, comprising contacting the sample with a detecting reagent (especially an antibody) that binds to CPN100149 polypeptide to form a complex, and detecting the formed complex;

(14) an affinity chromatography method for substantially purifying a CPN100149 polypeptide, comprising:

(a) contacting a sample containing a CPN100149 polypeptide with a detecting reagent (especially an antibody) that binds to CPN100149

polypeptide to form a complex;
 (b) isolating the formed complex;
 (c) dissociating the formed complex; and
 (d) isolating the dissociated CPN100149 polypeptide;
 (15) an antibody that immunospecifically binds the polypeptide of
 (1), or a fragment or derivative of the antibody containing the binding
 domain.

USE

USE - The *Chlamydia pneumoniae* polynucleotides and polypeptides of the invention can be used in vaccination methods for preventing and treating Chlamydia infection (e.g. infections caused by *C. trachomatis*, *C. psittaci*, *C. pneumoniae* or *C. pecorum*). The polynucleotides can be used to produce the polypeptides recombinantly, in the construction of vaccine vectors, as a vaccine agent, and in the construction of an attenuated Chlamydia strain that can over-express a polypeptide of the invention, or express it in a modified form. The polypeptides are also useful as vaccine agents, and for the preparation of medicaments for treating or preventing Chlamydia infection, e.g. community acquired pneumonia, and upper respiratory tract infections such as bronchitis and sinusitis.

L59 ANSWER 41 OF 41 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2000-183129 [200016] WPIX
 TITLE: Novel Chlamydia pneumoniae antigens used for immunization
 and protection against Chlamydia diseases
 DERWENT CLASS: B04; D16; S03
 INVENTOR: MURDIN A D; OOMEN R P
 PATENT ASSIGNEE: (AVET-C) AVENTIS PASTEUR LTD; (SNFI-C) CONNAUGHT LAB LTD
 COUNTRY COUNT: 85

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000006739	A2	20000210	(200016)*	EN	45	[2]
AU 9947929	A	20000221	(200029)	EN		
EP 1144638	A2	20011017	(200169)	EN		
JP 2002521059	T	20020716	(200261)	JA	62	
MX 2001001089	A1	20020601	(200365)	ES		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006739	A2	WO 1999-IB1328	19990727
AU 9947929	A	AU 1999-47929	19990727
EP 1144638	A2	EP 1999-931394	19990727
EP 1144638	A2	WO 1999-IB1328	19990727
JP 2002521059	T	WO 1999-IB1328	19990727
MX 2001001089	A1	WO 1999-IB1328	19990727
JP 2002521059	T	JP 2000-562521	19990727
MX 2001001089	A1	MX 2001-1089	20010129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9947929	A	WO 2000006739 A
EP 1144638	A2	WO 2000006739 A
JP 2002521059	T	WO 2000006739 A
MX 2001001089	A1	WO 2000006739 A

PRIORITY APPLN. INFO: US 1999-360707 19990726
 US 1998-94198P 19980727

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated polypeptide that is at least 75% homologous to the 363 amino acid sequence, and functional fragments of it;
- (2) an expression cassette, comprising (I) operably linked to a promoter;
- (3) an expression vector comprising the expression cassette of (2);
- (4) a host cell comprising the expression cassette of (2);
- (5) a method for producing a recombinant CPN100202 polypeptide, comprising culturing the host cell of (4) under conditions that allow the expression of the polypeptide, and recovering it;
- (6) a vaccine vector, comprising the expression cassette of (2);
- (7) a pharmaceutical composition, comprising an immunologically effective amount of the vaccine vector of (6);
- (8) a pharmaceutical composition, comprising an immunologically effective amount of the polypeptide of (1), and further comprising an adjuvant, and one or more known Chlamydia antigens;
- (9) a method for inducing an ~~immune response~~ in a mammal, comprising administering the vaccine vector of (6) or the pharmaceutical composition of (8);
- (10) a polynucleotide probe reagent capable of detecting the presence of Chlamydia in biological material, comprising a polynucleotide that hybridizes to (I) under stringent conditions;
- (11) a hybridization method for detecting the presence of Chlamydia in a sample, comprising obtaining polynucleotide from the sample, hybridizing the polynucleotide with the probe of (10) under hybridization conditions, and detecting hybridization;
- (12) an amplification method for detecting the presence of Chlamydia in a sample, comprising obtaining polynucleotide from the sample, amplifying the polynucleotide using one or more of the reagent probes of (10), and detecting the amplified polynucleotide;
- (13) a method for detecting the presence of Chlamydia in a sample, comprising contacting the sample with a detecting reagent that binds to CPN100202 polypeptide, and detecting the formed complex;
- (14) an affinity chromatography method for substantially purifying a CPN100202 polypeptide, comprising contacting a sample with a detecting reagent that binds to CPN100202 polypeptide, and isolating the formed complex, dissociating it and isolating the CPN100202 polypeptide; and
- (15) an antibody that immunospecifically binds the polypeptide of (1), or a fragment or derivative of the antibody containing the binding domain.

USE

USE - The *Chlamydia pneumoniae* polynucleotides and polypeptides of the invention can be used in vaccination methods for preventing and treating Chlamydia infections caused by *C. trachomatis*, *C. psittaci*, *C. pneumoniae* or *C. pecorum*. The polynucleotides can be used to produce the polypeptides recombinantly, in the construction of vaccine vectors, as a vaccine agent, and in the construction of an ~~attenuated~~ Chlamydia strain that can over-express a polypeptide of the invention, or express it in a modified form. The polypeptides are also useful as vaccine agents, and for the preparation of medicaments for treating or preventing Chlamydia infection, e.g. community acquired pneumonia, and upper respiratory tract infections such as bronchitis and sinusitis.

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FILE COVERS 1907 - 13 Dec 2010 VOL 153 ISS 25
FILE LAST UPDATED: 12 Dec 2010 (20101212/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the fourth quarter of 2010.

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=> fil medline embase biosis wpix

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=> d que 150
L50      12 SEA (CHLAMYDOPHIL? OR ?CHLAMYD?(2A) (ABORTUS OR FELIS OR
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PROCESSING COMPLETED FOR L50
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          ANSWERS '23-24' FROM FILE MEDLINE
          ANSWER '25' FROM FILE WPIX
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L60  ANSWER 1 OF 25  HCAPLUS  COPYRIGHT 2010 ACS on STN DUPLICATE 1
ACCESSION NUMBER:    2009:1618863  HCAPLUS  Full-text
DOCUMENT NUMBER:     152:95703
TITLE:               Salmonella vectors comprising attenuated SPI-2, aroC
                    and/or ssa genes and Chlamydia PmpG peptide as
                    vaccines against chlamydial infection
INVENTOR(S):         Telfer, Jonathan Lewis; Redfern, Mark Richard; Lacy,
                    Michael Joseph
PATENT ASSIGNEE(S):  Emergent Product Development UK Limited, UK
SOURCE:               PCT Int. Appl., 108pp.
                    CODEN: PIXXD2
DOCUMENT TYPE:        Patent
LANGUAGE:             English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2009158240	A1	20091230	WO 2009-US47542	20090616
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,				
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,				
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP,				
KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA,				
MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE,				
PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV,				

SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
 IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

WO 2008156729 A2 20081224 WO 2008-US7490 20080616

WO 2008156729 A3 20090226

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
 FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
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 ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
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 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.:

WO 2008-US7490 A 20080616

US 2008-118204P P 20081126

US 2007-929129P P 20070614

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes
 and Chlamydia PmpG peptide as vaccines against chlamydial infection

AB The invention provides an ~~attenuated~~ Salmonella vaccine vector comprising one
 or more heterologous polynucleotides that encode immunogenic Chlamydial
 peptides. In one embodiment, the ~~attenuated~~ Salmonella vaccine vector
 comprises aroC and ssaV ~~attenuating~~ mutations. The heterologous
 polynucleotides encoding the immunogenic Chlamydial peptides can be under the
 control of an inducible promoter such as a Salmonella ssaG promoter. In one
 embodiment of the invention, the immunogenic Chlamydial peptide is a PmpG
 peptide, for instance, a CT110, CT84 or CT40 peptide.

IT Mycolic acids
 Oils

RL: BSU (Biological study, unclassified); MOA (Modifier or additive use);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (-based adjuvant; Salmonella vectors comprising ~~attenuated~~
 SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines
 against chlamydial infection)

IT Antigens

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
 PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (Chamydia; Salmonella vectors comprising ~~attenuated~~ SPI-2,
 aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against
 chlamydial infection)

IT Infection

(Chlamydial; Salmonella vectors comprising ~~attenuated~~ SPI-2,
 aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against
 chlamydial infection)

IT Oligonucleotides

RL: BSU (Biological study, unclassified); MOA (Modifier or additive use);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (CpG-containing; Salmonella vectors comprising ~~attenuated~~ SPI-2,
 aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against
 chlamydial infection)

IT Immune adjuvants

- (Freund's incomplete; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Immune adjuvants
(Freund's; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(HtrA; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Antibodies and Immunoglobulins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(IgA, mucosal response; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MOMP (major outer membrane protein); Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Immune adjuvants
(N-Opaca; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OmcB; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OmpH; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PmpD (polymorphic membrane protein D); Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PmpE (polymorphic membrane protein E); Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)

- IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (PmpG (polymorphic membrane protein G); Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (PmpH (polymorphic membrane protein H); Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (PmpI (polymorphic membrane protein I); Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Arthritis
 (Reiter's syndrome; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
 RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
 (SPI-2 (Salmonella pathogenicity island 2); Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT AIDS (disease)
 Asthma
 Atherosclerosis
 Carotid artery stenosis
 Cerebrovascular disease
 Chlamydia
 Chlamydia muridarum
 Chlamydia pneumoniae
 Chlamydia trachomatis
 Chronic obstructive pulmonary disease
 Claudication
 Coronary artery disease
 Coronary artery disease
 DNA sequences
 Drug delivery systems
 Endometritis
 Epididymis
 Escherichia coli
 Human
 Human immunodeficiency virus
 Immune adjuvants
 Immunization
 Linking agents
 Liposomes
 Lymphogranuloma venereum
 Macrophage
 Molecular cloning
 Mutagenesis
 Myocardial infarction

Newborn
 Oral drug delivery systems
 Oxidative stress, biological
 Pharmaceutical adjuvants
 Pharmaceutical carriers
 Pharmaceutical liposomes
 Pneumonia
 Proctitis
 Protein sequences
 Salmonella
 Salmonella enterica
 Salmonella enterica dublin
 Salmonella enterica enterica choleraesuis
 Salmonella enterica enterica gallinarum
 Salmonella enterica enterica pullorum
 Salmonella enterica enteritidis
 Salmonella enterica paratyphi
 Salmonella enterica typhi
 Salmonella enterica typhimurium
 Salmonella hadar
 Salmonella infantis
 Sarcoidosis
 Stroke
 Trachoma
 Uterine cervical dysplasia
 Uterine cervicitis
 Vaccines

(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or
 ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial
 infection)

IT Nucleic acids
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
 PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)

(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or
 ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial
 infection)

IT Antibodies and Immunoglobulins
 Chemokines
 Cytokines
 Interferons
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
 THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)

(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or
 ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial
 infection)

IT Glycoproteins
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or
 ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial
 infection)

IT Interleukins
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use);
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or
 ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial
 infection)

IT Peanut oil

- RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Peptidoglycans
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Peptidoglycans
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Proteoglycans
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Saponins
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Salmonella enterica typhi
(ZH9; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Respiratory system disease
(acute; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Female reproductive system disease
(adnexitis; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Aneurysm
(aortic; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(aroC; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Lipopolysaccharides
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bacterial; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Immunization
(booster; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against

- chlamydial infection)
- IT Artery
(carotid, disease; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Immunity
(cell-mediated; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Pain
(chronic, pelvic; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Pharmaceutical excipients
(diluent; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Urethra
(disease, urethritis; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Pregnancy disorders
(ectopic pregnancy; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Mycolic acids
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters, with trehalose; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Klebsiella pneumoniae
(extract; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(htrA; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Coordination compounds
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immune stimulating; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Promoter (genetic element)
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(inducible; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Eye disease
Lung disease
(infection; Salmonella vectors comprising attenuated SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Peptides

- RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Glycerides
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(miglyol; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Glycopeptides
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mucopeptides; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Glycopeptides
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(muramic-acid containing diglycopeptides; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Oils
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neutral; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Codons
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(optimization; Escherichia coli; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Alcohols
RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyhydric; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Streptococcus
(preparation; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Prokaryota
(promoter; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Prostatitis
(prostatitis; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Arthritis
Respiratory system disease
(reactive; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Female reproductive system disease
Inflammation

- (salpingitis; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Chlamydia trachomatis
(serotype B; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Chlamydia trachomatis
(serotype F; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Chlamydia trachomatis
(serotype L2; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Genetic element
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(signal sequence, CS3; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Genetic element
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(signal sequence, secretion; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Secretion (process)
(signal; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Mutagenesis
(site-directed, deletion; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Mutagenesis
(site-directed, substitution; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssa; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaA; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaB; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)

- (ssaC; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaD; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaE; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaF; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaG; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaH; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaI; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaJ; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaK; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaL; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)

- (ssaM; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaO; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaP; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaQ; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaR; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaS; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaT; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaU; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssaV; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(ssc; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL

- (Biological study); PROC (Process)
 (sse; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Gene, microbial
 RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
 (ssr; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Fertility disorders
 (tubal factor; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Inflammation
 (urethritis; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Immunization
 (vaccination; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT DNA
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (vaccine; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT Fats and Glyceridic oils
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (vegetable; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT 9003-01-4D, Polyacrylic acid, crosslinked
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Carbopol; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT 99-20-7D, Trehalose, 6,6'-diesters with mycolic acids 100-37-8D, DEAE, dextran conjugate 1344-28-1, Aluminum oxide, biological studies 1406-18-4, Vitamin E 7429-90-5D, Aluminum, salts 7784-30-7, Aluminum phosphate 9004-54-0D, Dextran, DEAE conjugate 21645-51-2, Aluminum hydroxide, biological studies
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT 211431-63-9, Ribi Tri-Mix
 RL: BSU (Biological study, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (adjuvant; Salmonella vectors comprising *attenuated* SPI-2, *aroC* and/or *ssa* genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)
- IT 1202438-30-9P 1202438-33-2P 1202438-37-6P 1202438-38-7P
 1202438-39-8P 1202438-41-2P 1202438-45-6P
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (amino acid sequence; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)

IT 1202438-25-2P 1202438-26-3P 1202438-27-4P 1202438-28-5P
 1202438-29-6P 1202438-31-0P 1202438-32-1P 1202438-34-3P
 1202438-35-4P 1202438-36-5P 1202438-40-1P 1202438-42-3P
 1202438-43-4P 1202438-44-5P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(nucleotide sequence; Salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)

IT 1202441-25-5 1202441-26-6 1202441-27-7 1202441-28-8 1202441-29-9

RL: PRP (Properties)

(unclaimed nucleotide sequence; salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)

IT 951755-15-0 1202441-24-4 1202441-30-2

RL: PRP (Properties)

(unclaimed protein sequence; salmonella vectors comprising ~~attenuated~~ SPI-2, aroC and/or ssa genes and Chlamydia PmpG peptide as vaccines against chlamydial infection)

L60 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2009:1391464 HCAPLUS Full-text

DOCUMENT NUMBER: 151:526373

TITLE: B cells are essential for moderating the inflammatory response and controlling bacterial multiplication in a mouse model of vaccination against *Chlamydoiphila abortus* infection

AUTHOR(S): Buendia, Antonio J.; Ortega, Nieves; Caro, Maria R.; Del Rio, Laura; Gallego, Maria C.; Sanchez, Joaquin; Navarro, Jose A.; Cuello, Francisco; Salinas, Jesus

CORPORATE SOURCE: Departamento de Anatomia y Anatomia Patologica Comparadas, Facultad de Veterinaria, Universidad de Murcia, Murcia, 30100, Spain

SOURCE: Infection and Immunity (2009), 77(11), 4868-4876
 CODEN: INFIBR; ISSN: 0019-9567

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI B cells are essential for moderating the inflammatory response and controlling bacterial multiplication in a mouse model of vaccination against *Chlamydoiphila abortus* infection

AB The use of ~~inactivated~~ vaccines associated with suitable adjuvants has been demonstrated to confer a good level of protection against *Chlamydoiphila abortus*. However, the basis of the ~~immune~~ protective response induced by these vaccines has been poorly studied. B cells act as an immune regulatory population during primary infection by *C. abortus*. Thus, it was considered of interest to study the role of B cells in an infection after immunization with a killed vaccine. For this, C57BL/6 and B-cell-deficient mice were immunized with a killed vaccine against *C. abortus* using QS-21 as the adjuvant. After challenge, the course of infection was established by anal. of morbidity, *C. abortus* burden in the liver, and histopathol. changes. The ~~immune~~ response induced was studied by real-time PCR techniques. Expts. involving transfer of

immune serum from vaccinated or previously infected mice were also carried out. The lack of B cells reduced the protection conferred by the QS-21 adjuvant vaccine. Vaccinated B-cell-deficient mice showed a 1000-fold-greater bacterial burden in the liver than their wild-type counterparts. Obvious differences existed in the liver, where a severe neutrophilic reaction and extended areas of necrosis were observed with vaccinated B-cell-deficient mice. An anal. of the immune response pointed to a significant increase in inflammatory cytokines and chemokines and the deficient production of transforming growth factor beta. The transfer of antibodies restored the level of protection. This study demonstrates that B cells play a crucial role in controlling *C. abortus* multiplication and prevent an exacerbated inflammatory response.

- ST B cell antibody cytokine chemokine vaccine *Chlamydomphila*
- IT CXC chemokines
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (CXCL10; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Immunity
 - (immunol. memory; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Macrophage
 - Neutrophil
 - T cell
 - (infiltration; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Necrosis
 - (liver; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Liver disease
 - (necrosis; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT B cell
 - Bacteremia
 - Chlamydomphila abortus*
 - Vaccines
 - (role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Antibodies and Immunoglobulins
 - Monocyte chemoattractant protein-1
 - Transforming growth factor β
 - Tumor necrosis factors
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)
- IT Ruminant
 - (role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination in relation to)
- IT Interferons
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (γ ; role of B-cells, antibodies, and cytokines in moderating inflammatory response to *Chlamydomphila abortus* challenge after protective vaccination)

L60 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN DUPLICATE 4
 ACCESSION NUMBER: 2005:29227 HCAPLUS Full-text
 DOCUMENT NUMBER: 142:133045
 TITLE: Vaccines comprising ~~attenuated~~ viruses and bacteria
 or antigen-encoding nucleic acids and antibodies for
 treating canine infectious respiratory disease
 INVENTOR(S): Brownlie, John; Chalker, Victoria Jane; Erles, Kerstin
 PATENT ASSIGNEE(S): The Royal Veterinary College, UK
 SOURCE: PCT Int. Appl., 102 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005002618	A1	20050113	WO 2004-GB2865	20040701
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004253344	A1	20050113	AU 2004-253344	20040701
AU 2004253344	B2	20100429		
CA 2530797	A1	20050113	CA 2004-2530797	20040701
EP 1638599	A1	20060329	EP 2004-743211	20040701
EP 1638599	B1	20090916		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004012194	A	20060822	BR 2004-12194	20040701
CN 1845754	A	20061011	CN 2004-80025001	20040701
JP 2007526884	T	20070920	JP 2006-518335	20040701
EP 2050463	A2	20090422	EP 2008-75914	20040701
EP 2050463	A3	20100120		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, HR, LT, LV, MK				
NZ 544453	A	20090430	NZ 2004-544453	20040701
AT 442857	T	20091015	AT 2004-743211	20040701
NO 2005006207	A	20060131	NO 2005-6207	20051227
IN 2005DN06133	A	20071221	IN 2005-DN6133	20051229
KR 2006106809	A	20061012	KR 2006-7000080	20060102
MX 2006000278	A	20060407	MX 2006-278	20060105
ZA 2006000918	A	20070725	ZA 2006-918	20060131
US 20070098739	A1	20070503	US 2006-563199	20060901
US 20080220018	A1	20080911	US 2007-849931	20070904
PRIORITY APPLN. INFO.:				
			GB 2003-15323	A 20030701
			EP 2004-743211	A3 20040701
			WO 2004-GB2865	W 20040701
			US 2006-563199	A3 20060901

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
 (1 CITINGS)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease

AB A vaccine composition for vaccinating dogs comprising any one or more of (a) an agent capable of raising an ~~immune response~~ against Streptococcus equi sub species zooepidemicus in a dog, (b) an agent capable of raising an ~~immune response~~ against Mycoplasma cynos in a dog, and (c) an agent capable of raising an ~~immune response~~ against a Chlamydoiphila in a dog.

ST canine infectious respiratory disease vaccine antibody Streptococcus Mycoplasma Chlamydoiphila

IT rRNA
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (23 S; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Glycoproteins
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (HE (hemagglutinin-esterase); vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Immunostimulants
 (adjuvants; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Saliva
 (anal.; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Infection
 (bacterial; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Samples
 (biol.; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Drug delivery systems
 (carriers; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Antibodies and Immunoglobulins
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (conjugates; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Adsorbents
 (immunoabsorbents; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Diagnosis
 (immunodiagnosis; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Immunoassay

- (immunosorbent; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Respiratory system, disease
 - (infection, canine; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Bronchi
 - (lavage; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Diagnosis
 - (serodiagnosis; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Proteins
 - RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (spike; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Body fluid
 - (tracheal wash or bronchiolar lavage; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Canine adenovirus
 - (type 2; vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Adoptive immunotherapy
 - Blood serum
 - Bordetella bronchiseptica
 - Canid herpesvirus 1
 - Canidae
 - Canine parainfluenza virus
 - Canine respiratory coronavirus
 - Canis familiaris
 - Chlamydia muridarum
 - Chlamydia pecorum
 - Chlamydia pneumoniae
 - Chlamydia suis
 - Chlamydia trachomatis
 - Chlamydophila
 - Chlamydophila abortus
 - Chlamydophila felis
 - Chlamydophila psittaci
 - DNA sequences
 - Drug delivery systems
 - Labels
 - Mycoplasma cynos
 - Streptococcus
 - Streptococcus equi zooepidemicus
 - Vaccines
 - Veterinary medicine
 - (vaccines comprising *attenuated* viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)
- IT Nucleic acids
 - RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Antibodies and Immunoglobulins

Gene, animal

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Antigens

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Infection

(viral; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT Trachea (anatomical)

(wash; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT 827073-23-4P, DNA (~~chlamydocphila~~ 23 S rRNA gene) 827073-24-5P
827073-25-6P 827073-26-7P 827073-27-8P 827073-28-9P 827073-29-0P
827073-30-3P

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(nucleotide sequence; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

IT 827073-86-9 827073-87-0

RL: PRP (Properties)

(unclaimed sequence; vaccines comprising ~~attenuated~~ viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease)

L60 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:335335 HCAPLUS Full-text

DOCUMENT NUMBER: 150:350162

TITLE: Tissue targeted antigenic activation of the ~~immune~~ ~~response~~ to cancers

INVENTOR(S): Gunn, Harold David

PATENT ASSIGNEE(S): Can.

SOURCE: U.S. Pat. Appl. Publ., 71pp., Cont.-in-part of U.S. Ser. No. 553,972.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20090074816	A1	20090319	US 2008-234569	20080919

WO 2005120560 A1 20051222 WO 2005-CA812 20050530
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG
US 20070104733 A1 20070510 US 2006-553972 20061027
WO 2008049231 A1 20080502 WO 2007-CA1915 20071025
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

US 2004-577206P P 20040607
WO 2005-CA812 A2 20050530
US 2006-553972 A2 20061027
WO 2007-CA1915 A2 20071025
CA 2006-2571805 A 20061220

TI Tissue targeted antigenic activation of the ~~immune response~~ to cancers
AB The invention provides in part methods of treating cancers of a specific organ or tissue by administering a composition that is antigenically specific for one or more microbes that are pathogenic in the specific organ or tissue in which the cancer is situated. The formulations of the invention thereby facilitate activation of a treatment response to a cancer in a particular tissue or organ. The compns. may for example include killed or ~~attenuated~~ microbial pathogens, and may be administered at sites distant from the cancer, for example the skin. In some embodiments, microbial species of endogenous flora that are known to cause infection in the relevant organ or tissue may be used in the formulation of the antigenic compns. In alternative embodiments, exogenous microbial pathogens that are known to cause infection in the relevant organ or tissue may be used in the formulation of the antigenic compns. The administration of the immunogenic compns. may be repeated relatively frequently over a relatively long period of time. In embodiments for intradermal or s.c. injection, dosages may be adjusted so that injections reproduce a consistent visible delayed inflammatory immune reaction at the successive site or sites of administration.

IT Colon
Duodenum
Ileum
Jejunum
Mouth
Reproductive system
Respiratory system
Skin
Stomach
Urinary system

Vagina
 (bacteria of; tissue targeted antigenic activation of the
 immune response to cancers)

IT Streptococcus
 (group C; tissue targeted antigenic activation of the immune
 response to cancers)

IT Streptococcus
 (group G; tissue targeted antigenic activation of the immune
 response to cancers)

IT Heart disease
 (heart neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Nervous system disease
 (meningeal, neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Carcinoma
 (nasopharyngeal; tissue targeted antigenic activation of the
 immune response to cancers)

IT Pharynx, neoplasm
 (nasopharynx, carcinoma; tissue targeted antigenic activation of the
 immune response to cancers)

IT Anus
 Penis
 Tonsil
 Trachea
 Ureter
 (neoplasm; tissue targeted antigenic activation of the immune
 response to cancers)

IT Body, anatomical
 (perineum, neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Pharmaceutical injections
 (s.c. injections; tissue targeted antigenic activation of the
 immune response to cancers)

IT Body, anatomical
 (sinus, neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Intestinal neoplasm
 (small intestinal neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Animal tissue, disease
 (soft, neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

IT Neoplasm
 (soft-tissue; tissue targeted antigenic activation of the
 immune response to cancers)

IT Adenoviridae
 Adrenal gland, neoplasm
 Animal virus
 Anti-inflammatory agents
 B19 virus
 Bacillus cereus
 Bacterial infection
 Bacteroides
 Bacteroides fragilis
 Biliary tract, neoplasm
 Bladder, neoplasm
 Bone neoplasm
 Bordetella pertussis
 Borrelia burgdorferi

Brain, neoplasm
Bronchi, neoplasm
Cervix, neoplasm
Chlamydia trachomatis
 Chlamydophila pneumoniae
Clostridium
Clostridium perfringens
Colon neoplasm
Corynebacterium diphtheriae
Corynebacterium ulcerans
Diagnosis
Epitopes
Escherichia coli
Esophagus, neoplasm
Eye, neoplasm
Fusobacterium
Gallbladder, neoplasm
Gardnerella vaginalis
Haemophilus influenzae
Head and Neck, neoplasm
Human
Human coxsackievirus
Human echovirus
Human herpesvirus
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 5
Inflammation
Influenza virus
Intestinal bacteria
Kidney, neoplasm
Klebsiella pneumoniae
Larynx, neoplasm
Liver, neoplasm
Lung, neoplasm
Lymph node, neoplasm
Mammary gland, neoplasm
Measles virus
Metastasis
Moraxella catarrhalis
Mouth, neoplasm
Mycobacterium tuberculosis
Mycoplasma pneumoniae
Neisseria meningitidis
Neoplasm
Nonsteroidal anti-inflammatory drugs
Ovary, neoplasm
Pancreas, neoplasm
Peptococcus
Peptostreptococcus
Peritoneum, neoplasm
Pleura, neoplasm
Prevotella melaninogenica
Prostate gland, neoplasm
Proteus (bacterium)
Pseudomonas aeruginosa
Rectal neoplasm
Rubella virus
Salivary gland, neoplasm
Salmonella

Serratia
 Shigella flexneri
 Skin, neoplasm
 Spinal cord, neoplasm
 Spleen, neoplasm
 Staphylococcus aureus
 Stomach, neoplasm
 Streptococcus agalactiae
 Streptococcus group A
 Streptococcus group B
 Streptococcus milleri
 Streptococcus pyogenes
 Testis, neoplasm
 Thyroid gland, neoplasm
 Treponema pallidum
 Uterus, neoplasm
 Vaccinia virus
 Vagina, neoplasm
 Viral infection
 Yersinia enterocolitica
 Yersinia pseudotuberculosis
 (tissue targeted antigenic activation of the immune
 response to cancers)

- IT Antigens
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (tissue targeted antigenic activation of the immune
 response to cancers)
- IT Neoplasm
 (tracheal; tissue targeted antigenic activation of the immune
 response to cancers)
- IT Vaccines
 (tumor; tissue targeted antigenic activation of the immune
 response to cancers)
- IT Immunization
 (vaccination; tissue targeted antigenic activation of the
 immune response to cancers)
- IT Antitumor agents
 (vaccines; tissue targeted antigenic activation of the immune
 response to cancers)
- IT Female reproductive system
 (vulva, neoplasm; tissue targeted antigenic activation of the
 immune response to cancers)

L60 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:511100 HCAPLUS Full-text

DOCUMENT NUMBER: 151:569204

TITLE: A chlamydial type III-secreted effector protein (Tarp)
 is predominantly recognized by antibodies from humans
 infected with Chlamydia trachomatis and induces
 protective immunity against upper genital tract
 pathologies in mice

AUTHOR(S): Wang, Jie; Chen, Lili; Chen, Fan; Zhang, Xiaoyun;
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 Robin; Mabey, David; Yu, Ping; Zhong, Guangming

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SOURCE: Vaccine (2009), 27(22), 2967-2980

CODEN: VACCDE; ISSN: 0264-410X
 PUBLISHER: Elsevier Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD
 (5 CITINGS)
 REFERENCE COUNT: 86 THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Chlamydia trachomatis genome is predicted to encode a type III secretion system consisting of more than 40 open reading frames (ORFs). To test whether these ORFs are expressed and immunogenic during chlamydial infection in humans, we expressed 55 chlamydial ORFs covering all putative type III secretion components plus control mols. as fusion proteins and measured the reactivity of these fusion proteins with antibodies from patients infected with C. trachomatis in the urogenital tract (24 antisera) or in the ocular tissue (8 antisera). Forty-five of the 55 proteins were recognized by at least 1 of the 32 human antisera, suggesting that these proteins are both expressed and immunogenic during chlamydial infection in humans. Tarp, a putative type III secretion effector protein, was identified as a novel immunodominant antigen due to its reactivity with the human antisera at high frequency and titer. The expression and immunogenicity of Tarp were confirmed in cell culture and mouse systems. Tarp was mainly associated with the infectious form of chlamydial organisms and became undetectable between 13 and 24 h during the infection cycle in cell culture. Mice intravaginally infected with C. muridarum developed Tarp-specific humoral and cellular immune responses. More importantly, immunization of mice with Tarp induced Th1-dominant immunity that significantly reduced the shedding of live organisms from the lower genital tract and attenuated inflammatory pathologies in the fallopian tube tissues. These observations have demonstrated that Tarp, an immunodominant antigen identified by human antisera, can induce protective immunity against chlamydial infection and pathol. in mice.

IT Chlamydia muridarum
 Chlamydia trachomatis
 Human
 Immune adjuvants
 T cell
 Vaccines
 (chlamydial type III-secreted effector protein (Tarp) is predominantly recognized by antibodies from humans infected with Chlamydia trachomatis)

L60 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2009:376725 HCAPLUS Full-text
 DOCUMENT NUMBER: 153:229263
 TITLE: Induction of a protective immune response against swine Chlamydia abortus infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP
 AUTHOR(S): Zhang, F.; Li, S.; Yang, J.; Yang, L.; He, C.
 CORPORATE SOURCE: Key Lab of Preventive Veterinary Medicine of Chinese Ministry of Agriculture, China Agricultural University, Beijing, Peop. Rep. China
 SOURCE: Zoonoses and Public Health (2009), 56(2), 71-76
 CODEN: ZPHOAH; ISSN: 1863-1959
 PUBLISHER: Wiley-Blackwell
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 TI Induction of a protective immune response against swine

Chlamydomydia abortus infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP

- AB *Chlamydomydia abortus* is the causative agent of abortion in pigs and pregnant women. Seroconversion rates were arranged from 11% to 80% in piglets and sows in China. These very high rates illustrate the scale of the problem in China and highlight the urgent need for the development of a *C. abortus* vaccine. An efficacious anti-chlamydial vaccine should induce not only strong mucosal and systemic T-helper type 1 (Th1) immune response but also give a humoral response that enhances Th1 activation following infection. To evaluate an active immune response of a combination of the major outer membrane protein (MOMP) DNA- and protein-based vaccines, 54 BALB/c mice were randomly assigned to six groups and inoculated i.m. with: (i) 100 µg pcDNA::MOMP, (ii) 10 µg r-MOMP, (iii) primed with 100 µg pcDNA::MOMP and boosted with 10 µg r-MOMP, (iv) primed-boosted with a combination of pcDNA::MOMP and r-MOMP simultaneously, (v) live-attenuated 1B vaccine, (vi) 100 µg pcDNA3.1 vector. All animals were vaccinated two times at 14 days intervals. Results showed that mice given DNA and r-MOMP induced higher antibody levels, higher T cells proliferation and an elevated level of chlamydial clearance in spleen, which was equivalent to the clearance of 1B vaccine. Mice administrated the DNA-primed/MOMP-boosted approach elicited moderate antibody levels, less T-lymphocyte proliferation and lower chlamydial clearance as compared with 1B vaccine. Co-immunization with DNA- and r-MOMP vaccine may provide novel ways for active immunization strategy against swine *C. abortus*.
- IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgG1; induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgG2a; induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgG2b; induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Porins
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MOMP (major outer membrane protein); induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Outer membrane proteins
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(OMP1; induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Helper T cell
(Th1 cell; induction of protective immune response against swine *Chlamydomydia abortus* infection in mice following co-vaccination of omp-1 DNA with recombinant MOMP)
- IT Abortion
Cell proliferation
Chlamydomydia abortus
Spleen

Sus scrofa domestica
Swine
T cell
Vaccines

(induction of protective immune response against
swine *Chlamydia abortus* infection in mice
following co-vaccination of omp-1 DNA with recombinant MOMP)

IT DNA
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(induction of protective immune response against
swine *Chlamydia abortus* infection in mice
following co-vaccination of omp-1 DNA with recombinant MOMP)

L60 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:572540 HCAPLUS Full-text

DOCUMENT NUMBER: 151:31315

TITLE: A vault nanoparticle vaccine induces protective
mucosal immunity

AUTHOR(S): Champion, Cheryl I.; Kickhoefer, Valerie A.; Liu,
Guangchao; Moniz, Raymond J.; Freed, Amanda S.;
Bergmann, Liisa L.; Vaccari, Dana; Raval-Fernandes,
Sujna; Chan, Ann M.; Rome, Leonard H.; Kelly, Kathleen
A.

CORPORATE SOURCE: Department of Pathology and Laboratory Medicine, David
Geffen School of Medicine at UCLA, University of
California Los Angeles, Los Angeles, CA, USA

SOURCE: PLoS One (2009), 4(4), No pp. given
CODEN: POLNCL; ISSN: 1932-6203
URL: <http://www.plosone.org/article/fetchObjectAttachment.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0005409&representation=PDF>

PUBLISHER: Public Library of Science

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Generation of robust cell-mediated immune responses at mucosal surfaces while
reducing overall inflammation is a primary goal for vaccination. Here we
report the use of a recombinant nanoparticle as a vaccine delivery platform
against mucosal infections requiring T cell-mediated immunity for eradication.
We encapsulated an immunogenic protein, the major outer membrane protein
(MOMP) of *Chlamydia muridarum*, within hollow, vault nanocapsules (MOMP-vaults)
that were engineered to bind IgG for enhanced immunity. Intranasal
immunization (i.n) with MOMP-vaults induced anti-chlamydial immunity plus
significantly attenuated bacterial burden following challenge infection.
Vault immunization induced anti-chlamydial immune responses and inflammasome
formation but did not activate Toll-like receptors. Moreover, MOMP-vault
immunization enhanced microbial eradication without the inflammation usually
associated with adjuvants. Vault nanoparticles containing immunogenic
proteins delivered to the respiratory tract by the i.n. route can act as
"smart adjuvants" for inducing protective immunity at distant mucosal surfaces
while avoiding destructive inflammation.

IT Antibacterial agents
Bacterial infection
Chlamydia muridarum
Dendritic cell
Pharmaceutical nanocapsules
Pharmaceutical nanoparticles
T cell

(vault nanoparticle vaccine induces protective mucosal immunity)

L60 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2008:529353 HCAPLUS Full-text

DOCUMENT NUMBER: 148:493801

TITLE: ~~Attenuated~~ organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the ~~immune response~~ to treat cancers

INVENTOR(S): Gunn, Harold David

PATENT ASSIGNEE(S): Can.

SOURCE: PCT Int. Appl., 151pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008049231	A1	20080502	WO 2007-CA1915	20071025
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
US 20070104733	A1	20070510	US 2006-553972	20061027
CA 2571805	A1	20080427	CA 2006-2571805	20061220
AU 2007308721	A1	20080502	AU 2007-308721	20071025
EP 2094293	A1	20090902	EP 2007-816065	20071025
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR			
US 20090074816	A1	20090319	US 2008-234569	20080919
CN 101636176	A	20100127	CN 2007-80048022	20090624
PRIORITY APPLN. INFO.:			US 2006-553972	A 20061027
			CA 2006-2571805	A 20061220
			US 2004-577206P	P 20040607
			WO 2005-CA812	A2 20050530
			WO 2007-CA1915	W 20071025

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI ~~Attenuated~~ organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the ~~immune response~~ to treat cancersAB The invention provides in part methods of treating cancers of a specific organ or tissue by administering a composition that is antigenically specific for one or more microbes that are pathogenic in the specific organ or tissue in which the cancer is situated. The formulations of the invention thereby facilitate activation of a treatment response to a cancer in a particular tissue or organ. The compns. may for example include killed or ~~attenuated~~ microbial pathogens, and may be administered at sites distant from the cancer, for example the skin. In some embodiments, microbial species of endogenous flora that are known to cause infection in the relevant organ or tissue may be

used in the formulation of the antigenic compns. In alternative embodiments, exogenous microbial pathogens that are known to cause infection in the relevant organ or tissue may be used in the formulation of the antigenic compns. The administration of the immunogenic compns. may be repeated relatively frequently over a relatively long period of time. In embodiments for intradermal or s.c. injection, dosages may be adjusted so that injections reproduce a consistent visible delayed inflammatory immune reaction at the successive site or sites of administration.

IT Adrenal gland

Anus

Biliary tract

Bladder

Blood vessel

Bone

Brain

Bronchi

Cervix

Colon

Esophagus

Eye

Gallbladder

Heart

Kidney

Larynx

Liver

Lung

Lymph node

Mammary gland

Meninges

Mouth

Ovary

Pancreas

Penis

Pleura

Prostate gland

Rectum

Salivary gland

Skin

Small intestine

Spinal cord

Spleen

Stomach

Testis

Thyroid gland

Tonsil

Trachea

Ureter

Uterus

Vagina

(-specific microbes; ~~attenuated~~ organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the ~~immune response~~ to treat cancers)

IT Streptococcus

(Viridans-group; ~~attenuated~~ organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the ~~immune response~~ to treat cancers)

IT Abdomen

(abdominal cavity, lymph node-specific microbes; ~~attenuated~~ organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the ~~immune~~)

response to treat cancers)

IT Reproductive system
 (adnexae-specific microbes; attenuated organ- or
 tissue-specific microbial pathogen and antiinflammatory agent for
 targeted antigenic activation of the immune response
 to treat cancers)

IT Actinomyces
 Acute myeloid leukemia
 Adenoviridae
 Animal organ
 Animal tissue
 Animal virus
 Anti-inflammatory agents
 Antioxidants
 Astrovirus
 B19 virus
 BK virus
 Bacillus cereus
 Bacteroides
 Bacteroides fragilis
 Bacteroides thetaiotaomicron
 Bacteroides vulgatus
 Bordetella pertussis
 Borrelia burgdorferi
 Bunyavirus
 Calicivirus
 Carcinoma
 Cervix, neoplasm
 Chemotherapy
 Chlamydia trachomatis
 Chlamydophila pneumoniae
 Clostridium
 Clostridium difficile
 Clostridium perfringens
 Coagulase-negative Staphylococcus
 Colon neoplasm
 Coronavirus
 Corynebacterium diphtheriae
 Corynebacterium jeikeium
 Cytomegalovirus
 Dermatitis
 Diagnosis
 Drug delivery systems
 Drugs
 Enterobacter
 Enterococcus
 Enterococcus faecalis
 Enterovirus
 Escherichia coli
 Eubacteria
 Flavivirus
 Fusobacterium
 Fusobacterium nucleatum
 Gardnerella vaginalis
 Haemophilus influenzae
 Helicobacter pylori
 Hepatitis A virus
 Hepatitis B virus
 Human
 Human coxsackievirus

Human echovirus
Human herpesvirus
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human metapneumovirus
Human parainfluenza virus
Human poliovirus
Inflammation
Influenza virus
Klebsiella
Klebsiella pneumoniae
Klebsiella pneumoniae ozaenae
Lactobacillus casei
Legionella
Leptospirosis
Listeria monocytogenes
Lung, neoplasm
Lymphocytic choriomeningitis virus
Mammalia
Measles virus
Melanoma
Metastasis
Microorganism
Moraxella catarrhalis
Morganella (bacterium)
Multiple myeloma
Mumps virus
Mycobacterium BCG
Mycobacterium avium
Mycobacterium tuberculosis
Mycobacterium vaccae
Mycoplasma pneumoniae
Neisseria gonorrhoeae
Neisseria meningitidis
Neoplasm
Nocardia rubra
Non-small-cell lung carcinoma
Nonsteroidal anti-inflammatory drugs
Norovirus
Oral drug delivery systems
Ovary, neoplasm
Pathogen
Peptococcus
Peptostreptococcus
Pharmaceutical injections
Prevotella
Prevotella melaninogenica
Proteus (bacterium)
Proteus mirabilis
Proteus vulgaris
Providencia
Pseudomonas
Pseudomonas aeruginosa
Rabies virus
Respiratory syncytial virus
Rhinovirus
Rotavirus
Rubella virus
Salmonella

Salmonella enteritidis
 Salmonella typhi
 Serratia
 Shigella flexneri
 Staphylococcus
 Staphylococcus aureus
 Stomach, neoplasm
 Streptococcus agalactiae
 Streptococcus alfa
 Streptococcus anaerobius
 Streptococcus anginosus
 Streptococcus bovis
 Streptococcus constellatus
 Streptococcus group A
 Streptococcus group B
 Streptococcus intermedius
 Streptococcus mitior
 Streptococcus mutans
 Streptococcus pneumoniae
 Streptococcus pyogenes
 Streptococcus salivarius
 Streptococcus sanguinis
 Treponema pallidum
 Vaccinia virus
 Veterinary medicine
 Yersinia enterocolitica
 Yersinia pseudotuberculosis
 (attenuated organ- or tissue-specific microbial pathogen and
 antiinflammatory agent for targeted antigenic activation of the
 immune response to treat cancers)

- IT Antigens
 Tumor antigens
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (attenuated organ- or tissue-specific microbial pathogen and
 antiinflammatory agent for targeted antigenic activation of the
 immune response to treat cancers)
- IT Digestive tract
 Duodenum
 Ileum
 Jejunum
 Reproductive system
 Respiratory system
 (bacterial flora; attenuated organ- or tissue-specific
 microbial pathogen and antiinflammatory agent for targeted antigenic
 activation of the immune response to treat cancers)
- IT Metastasis
 (bone neoplasm; attenuated organ- or tissue-specific
 microbial pathogen and antiinflammatory agent for targeted antigenic
 activation of the immune response to treat cancers)
- IT Carcinoma
 Colon neoplasm
 (colon carcinoma, metastasis; attenuated organ- or
 tissue-specific microbial pathogen and antiinflammatory agent for
 targeted antigenic activation of the immune response
 to treat cancers)
- IT Metastasis
 (colon carcinoma; attenuated organ- or tissue-specific
 microbial pathogen and antiinflammatory agent for targeted antigenic
 activation of the immune response to treat cancers)

- IT Streptococcus
(group C; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Streptococcus
(group G; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Animal tissue
(inguinal lymph node-specific microbes; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Drug delivery systems
(intradermal; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Metastasis
(kidney neoplasm; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Metastasis
(liver neoplasm; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Metastasis
(lung neoplasm; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Metastasis
(lymph node neoplasm; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Abdomen
Arm
Head and Neck
Leg
(lymph node-specific microbes; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Metastasis
(mammary gland neoplasm; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Bone neoplasm
Kidney, neoplasm
Liver, neoplasm
Lung, neoplasm
Lymph node, neoplasm
Mammary gland, neoplasm
Ovary, neoplasm
Pancreas, neoplasm
Skin, neoplasm
(metastasis; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)
- IT Pharynx
(nasopharynx, -specific microbes; attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for

targeted antigenic activation of the immune response
to treat cancers)

- IT Lymphoma
(nodular; attenuated organ- or tissue-specific microbial
pathogen and antiinflammatory agent for targeted antigenic activation
of the immune response to treat cancers)
- IT Anaerobic bacteria
Vaccines
(oral; attenuated organ- or tissue-specific microbial
pathogen and antiinflammatory agent for targeted antigenic activation
of the immune response to treat cancers)
- IT Metastasis
(ovary neoplasm; attenuated organ- or tissue-specific
microbial pathogen and antiinflammatory agent for targeted antigenic
activation of the immune response to treat cancers)
- IT Body, anatomical
(pelvis, cancer; attenuated organ- or tissue-specific
microbial pathogen and antiinflammatory agent for targeted antigenic
activation of the immune response to treat cancers)
- IT Abdomen, neoplasm
(perineum metastasis; attenuated organ- or tissue-specific
microbial pathogen and antiinflammatory agent for targeted antigenic
activation of the immune response to treat cancers)
- IT Body, anatomical
(perineum, -specific microbes; attenuated organ- or
tissue-specific microbial pathogen and antiinflammatory agent for
targeted antigenic activation of the immune response
to treat cancers)
- IT Microorganism
(retroperitoneal area-specific; attenuated organ- or
tissue-specific microbial pathogen and antiinflammatory agent for
targeted antigenic activation of the immune response
to treat cancers)
- IT Pharmaceutical injections
(s.c. injections; attenuated organ- or tissue-specific
microbial pathogen and antiinflammatory agent for targeted antigenic
activation of the immune response to treat cancers)
- IT Body, anatomical
(sinus, -specific microbes; attenuated organ- or
tissue-specific microbial pathogen and antiinflammatory agent for
targeted antigenic activation of the immune response
to treat cancers)
- IT Animal tissue
(soft, -specific microbes; attenuated organ- or
tissue-specific microbial pathogen and antiinflammatory agent for
targeted antigenic activation of the immune response
to treat cancers)
- IT Vaccines
(tumor; attenuated organ- or tissue-specific microbial
pathogen and antiinflammatory agent for targeted antigenic activation
of the immune response to treat cancers)
- IT Antitumor agents
(vaccines; attenuated organ- or tissue-specific microbial
pathogen and antiinflammatory agent for targeted antigenic activation
of the immune response to treat cancers)
- IT Female reproductive system
(vulva, -specific microbes; attenuated organ- or
tissue-specific microbial pathogen and antiinflammatory agent for
targeted antigenic activation of the immune response
to treat cancers)

IT 140207-01-8, Respivax
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)

IT 50-81-7, Vitamin C, biological studies 53-03-2, Prednisone 53-86-1, Indomethacin 148-82-3, Melphalan 1406-16-2, Vitamin D 1406-18-4, Vitamin E 22204-53-1, Naprosyn
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (attenuated organ- or tissue-specific microbial pathogen and antiinflammatory agent for targeted antigenic activation of the immune response to treat cancers)

L60 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2008:484047 HCAPLUS Full-text

DOCUMENT NUMBER: 148:515683

TITLE: *Chlamydia muridarum* Evades Growth Restriction by the IFN- γ -Inducible Host Resistance Factor Irgb10

AUTHOR(S): Coers, Joern; Bernstein-Hanley, Isaac; Grotsky, David; Parvanova, Iana; Howard, Jonathan C.; Taylor, Gregory A.; Dietrich, William F.; Starnbach, Michael N.

CORPORATE SOURCE: Department of Microbiology and Molecular Genetics, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Journal of Immunology (2008), 180(9), 6237-6245
 CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI *Chlamydia muridarum* Evades Growth Restriction by the IFN- γ -Inducible Host Resistance Factor Irgb10

AB Chlamydiae are obligate intracellular bacterial pathogens that exhibit a broad range of host tropism. Differences in host tropism between *Chlamydia* species have been linked to host variations in IFN- γ -mediated immune responses. In mouse cells, IFN- γ can effectively restrict growth of the human pathogen *Chlamydia trachomatis* but fails to control growth of the closely related mouse pathogen *Chlamydia muridarum*. The ability of mouse cells to resist *C. trachomatis* replication is largely dependent on the induction of a family of IFN- γ -inducible GTPases called immunity-related GTPases or IRGs. In this study we demonstrate that *C. muridarum* can specifically evade IRG-mediated host resistance. It has previously been suggested that *C. muridarum* inactivates the IRG protein Irga6 (Iigp1) to dampen the murine immune response. However, we show that Irga6 is dispensable for the control of *C. trachomatis* replication. Instead, an effective IFN- γ response to *C. trachomatis* requires the IRG proteins Irgm1 (Irg47), Irgm3 (Igtg), and Irgb10. Ectopic expression of Irgb10 in the absence of IFN- γ is sufficient to reduce intracellular growth of *C. trachomatis* but fails to restrict growth of *C. muridarum*, indicating that *C. muridarum* can specifically evade Irgb10-driven host responses. Importantly, we find that Irgb10 protein intimately assoc. with inclusions harboring *C. trachomatis* but is absent from inclusions formed by *C. muridarum*. These data suggest that *C. muridarum* has evolved a mechanism to escape the murine IFN- γ response by restricting access of Irgb10 and possibly other IRG proteins to the inclusion.

IT *Chlamydia muridarum*

Chlamydia trachomatis
 (Chlamydia muridarum evades growth restriction by
 the interferon- γ -inducible host resistance factor Irgb10 protein)

IT Inclusion bodies
 (Chlamydia muridarum evades growth restriction by
 the interferon- γ -inducible host resistance factor Irgb10 protein
 in relation to inclusion bodies)

IT Proteins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (Irgb10; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

IT Proteins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (Irgb1; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

IT Proteins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (Irgb3; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

IT Proteins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (Irgb6; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

IT Immunity
 (antibacterial; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

IT Interferons
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (γ ; Chlamydia muridarum evades growth
 restriction by the interferon- γ -inducible host resistance factor
 Irgb10 protein)

L60 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2009:36506 HCAPLUS Full-text

DOCUMENT NUMBER: 151:170688

TITLE: Immunization with chlamydial plasmid protein pORF5 DNA
 vaccine induces protective immunity against genital
 chlamydial infection in mice

AUTHOR(S): Li, ZhongYu; Wang, ShiPing; Wu, YiMou; Zhong,
 GuangMing; Chen, Ding

CORPORATE SOURCE: Xiangya School of Medicine, Central South University,
 Changsha, 410078, Peop. Rep. China

SOURCE: Science in China, Series C: Life Sciences (2008),
 51(11), 973-980

CODEN: SCCLFO; ISSN: 1006-9305

PUBLISHER: Science in China Press

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB To validate the immune protective efficacy of pORF5 DNA vaccine and to analyze
 potential mechanisms related to this protection. In this study, pORF5 DNA

vaccine was constructed and evaluated for its protective immunity in a mouse model of genital chlamydial infection. Groups of BALB/c mice were immunized intranasally with pORF5 DNA vaccine. Humoral and cell mediated ~~immune~~ ~~responses~~ were evaluated. The clearance ability of chlamydial challenge from the genital tract and the chlamydia-induced upper genital tract gross pathol. and histopathol. characterization were also detected. The results showed that the total and the IgG2a anti-pORF5 antibody levels in serum were significantly elevated after pcDNA3.1-pORF5 vaccination, as were the total antibody and IgA levels in vaginal fluids. PcDNA3.1-pORF5 induced a significantly high level of Th1 response as measured by robust gamma interferon (IFN- γ). Minimal IL-4 was produced by ~~immune~~ T cells in ~~response~~ to the re-stimulation with pORF5 protein or the ~~inactive~~ elementary body in vitro. PcDNA3.1-pORF5-vaccinated mice displayed significantly reduced bacterial shedding upon a chlamydial challenge and an accelerated resolution of infection. 100% Of pcDNA3.1-pORF5 vaccinated mice successfully resolved the infection by day 24. PcDNA3.1-pORF5-immunized mice also exhibited protection against pathol. consequences of chlamydial infection. The stimulated index was significantly higher than that of mice immunized with pcDNA3.1 and PBS (P<0.05). Together, these results demonstrated that immunization with pORF5 DNA vaccine is a promising approach for eliciting a protective immunity against a genital chlamydial challenge.

IT Cell proliferation

Chlamydia muridarum

Chlamydia trachomatis

Fibrosis

Lymphocyte

Vaccines

(immunization with chlamydial plasmid protein pORF5 DNA vaccine induced protective immunity against genital chlamydial infection in mice)

L60 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2008:971649 HCAPLUS Full-text

DOCUMENT NUMBER: 150:327523

TITLE: Induction of ~~immune responses~~ against Chlamydomphila abortus using bacteriophage-mediated DNA vaccination

AUTHOR(S): Liu, Wei; Zhang, Chang; Zhang, Fa-ming; Li, Ying-chao; Yang, Jun-jing; Ling, Yong; Yuan, Ji-lei; He, Cheng

CORPORATE SOURCE: Veterinary Medicine College, China Agricultural University, Beijing, 100193, Peop. Rep. China

SOURCE: Zhongguo Nongye Daxue Xuebao (2008), 13(4), 82-86
CODEN: ZNDXAA; ISSN: 1007-4333

PUBLISHER: Zhongguo Nongye Daxue Xuebao Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

TI Induction of ~~immune responses~~ against Chlamydomphila abortus using bacteriophage-mediated DNA vaccination

AB Omp-1 gene coding major outer membrane protein of Chlamydi ophila has been identified as one of the most important protection antigens of Chlamydi ophila and plays an important role in cellular immunization of Chlamydia abortus. NM1149 phage vector, a new vaccine delivery system, is able to carry a large gene fragment and its capsid protein can protect the target gene from degradation In the current study, Omp-1 gene was constructed into NM1149, and a pos. bacteriophage was determined and proliferated. Twenty-seven BALB/c mice were randomly assigned to three groups and inoculated i.m. with: 1 10 g (1.5 \times 10⁵ pfu) live-attenuated vaccine; 2 250 ng (5 \times 10¹¹ pfu) phage vaccine based on omp-1 gene, and 3 250 ng (5 \times 10¹¹ pfu) phage vector. All animals were vaccinated at 14 day intervals on day 2, 16, and 30. Antibody levels against major outer membrane and T-lymphocyte proliferation were detected by

ELISA and MTT methods. Results showed that mice administrated with the phage vaccine developed higher T lymphocyte proliferation levels while those given the live-attenuated 1B vaccine elicited higher antibody levels and less T lymphocyte proliferation. Immunization with phage vaccines may provide a novel way to improve protection against *Chlamydomphila abortus* infection in small animals.

ST major outer membrane protein NM1149 phage immunization; *Chlamydomphila abortus* DNA bacterin

IT Cell proliferation

Chlamydomphila abortus

Enzyme-linked immunosorbent assay

Immunization

Polymerase chain reaction

T cell

Vaccines

(induction of immune responses against

Chlamydomphila abortus using bacteriophage-mediated DNA vaccination)

IT Antibodies and Immunoglobulins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

BIOL (Biological study); PREP (Preparation)

(induction of immune responses against

Chlamydomphila abortus using bacteriophage-mediated DNA vaccination)

IT Gene, microbial

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(ompl; induction of immune responses against

Chlamydomphila abortus using bacteriophage-mediated DNA vaccination)

IT 80498-17-5, Restriction endonuclease, EcoRI 81295-22-9, Restriction endonuclease, HindIII

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(induction of immune responses against

Chlamydomphila abortus using bacteriophage-mediated DNA vaccination)

L60 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:162221 HCAPLUS [Full-text](#)

TITLE: Therapeutic *Chlamydomphila abortus* and *C. pecorum* vaccination transiently reduces bovine mastitis associated with *Chlamydomphila* infection

AUTHOR(S): Biesenkamp-Uhe, Carolin; Li, Yihang; Hehnen, Hans-Robert; Sachse, Konrad; Kaltenboeck, Bernhard

CORPORATE SOURCE: Bayer HealthCare AG., Cologne, D-50739, Germany

SOURCE: Infection and Immunity (2007), 75(2), 870-877

CODEN: INFIBR; ISSN: 0019-9567

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Therapeutic *Chlamydomphila abortus* and *C. pecorum* vaccination transiently reduces bovine mastitis associated with *Chlamydomphila* infection

AB Infections with *Chlamydomphila abortus* and *C. pecorum* are highly prevalent in cattle and have been associated with bovine mastitis. A prospective cohort study was conducted with a herd of 140 Holstein dairy cows to investigate the

influence of *Chlamydoiphila* infection on subclin. inflammation of the bovine mammary gland as characterized by somatic cell nos. in milk. PCR detection of *C. abortus* and low serum antibody levels against *Chlamydoiphila* spp. were significantly associated with subclin. mastitis. To examine the effect of the infection by response modification, immune perturbation was done by two s.c. administrations of an exptl. vaccine preparation of inactivated *C. abortus* and *C. pecorum* elementary bodies. Vaccination against *Chlamydoiphila* highly significantly decreased milk somatic cell nos., thus reducing bovine mastitis, and increased antibody levels against *Chlamydoiphila* but did not eliminate shedding of *C. abortus* in milk as detected by PCR. The protective effect peaked at 11 wk after vaccination and lasted for a total of 14 wk. Vaccination with the *Chlamydoiphila* vaccine, a mock vaccine, or a combination vaccine against bovine viral diseases highly significantly increased *C. abortus* shedding in milk for 1 wk, presumably mediated by the vaccine adjuvant. In summary, this study shows an etiol. involvement of the widespread *Chlamydoiphila* infections in bovine mastitis, a herd disease of critical importance for the dairy industry. Furthermore, this investigation shows the potential for temporary improvement of chlamydial disease by therapeutic vaccination. *Chlamydoiphila* vaccination of cattle might serve as a testing ground for vaccines against human chlamydial infections.

L60 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:419467 HCAPLUS Full-text

DOCUMENT NUMBER: 147:341867

TITLE: Role of polymorphonuclear neutrophils (PMNs) and NK cells in the protection conferred by different vaccines against *Chlamydoiphila abortus* infection

AUTHOR(S): Ortega, N.; Caro, M. R.; Buendia, A. J.; Gallego, M. C.; Del Rio, L.; Martinez, C. M.; Nicolas, L.; Cuello, F.; Salinas, J.

CORPORATE SOURCE: Departamento de Sanidad Animal, Facultad de Veterinaria, Universidad de Murcia, Murcia, Spain

SOURCE: Research in Veterinary Science (2007), 82(3), 314-322
CODEN: RVTSA9; ISSN: 0034-5288

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Role of polymorphonuclear neutrophils (PMNs) and NK cells in the protection conferred by different vaccines against *Chlamydoiphila abortus* infection

AB Ovine enzootic abortion (OEA) is caused by *Chlamydoiphila abortus*, an intracellular bacterium which acts by infecting the placenta, causing abortion in the last term of gestation. The main prevention strategy against OEA is the vaccination of flocks. An effective vaccine against *C. abortus* must induce a Th1-like specific immune response, which is characterized by the early production of IFN- γ and the activation of CD8+T cells. Moreover, vaccine effectiveness could be modulated by the functioning of the innate immunity. The purpose of this study was to ascertain how polymorphonuclear neutrophils (PMNs) and NK cells might influence vaccine-induced protection. The live attenuated 1B vaccine and two inactivated exptl. vaccines, adjuvated with aluminum hydroxide (AH) or QS-21 (QS), were used in PMN-depleted or NK cell-depleted mice. For PMN depletion, RB6-8C5 monoclonal antibody, which recognizes GR1+receptors (Robben, P.M., LaRegina, M., Kuziel, W.A., Sibley, L.D. 2005. Recruitment of Gr-1+ monocytes is essential for control of acute toxoplasmosis. The Journal of Exptl. Medicine 201, 1761-1769.) was used, while for NK cell-depletion the anti-asialo GM1 polyclonal antibody was used. The depletion of PMNs caused 100% mortality in non-vaccinated mice (NV) and 60%

mortality in the AH-vaccinated mice by day 10 p.i., while both groups showed a significant increase in their bacterial burden in the liver by day 4 p.i. The depletion of NK cells caused mortality only in the NV group (50% by day 10 p.i.), although this group and the 1B vaccinated mice showed an increased bacterial burden in the liver at day 4 p.i. Our results suggest that the importance of PMNs in inactivated vaccines depends on the adjuvant chosen. The results also demonstrated that the importance of NK cells is greater in live vaccines than in inactivated vaccines.

- ST vaccine QS21 aluminum hydroxide neutrophil natural killer cell
Chlamydomphila
- IT Lymphocyte
(natural killer cell; role of polymorphonuclear neutrophils and natural killer cells in the protection conferred by different vaccine against Chlamydomphila abortus infection)
- IT Bacterial infection
Chlamydomphila abortus
Liver
Neutrophil
(role of polymorphonuclear neutrophils and natural killer cells in the protection conferred by different vaccine against Chlamydomphila abortus infection)
- IT Vaccines
(role of polymorphonuclear neutrophils and natural killer cells in the protection conferred by different vaccines against Chlamydomphila abortus infection)
- IT 21645-51-2, Aluminum hydroxide, biological studies 141256-04-4, QS-21
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(role of polymorphonuclear neutrophils and natural killer cells in the protection conferred by different vaccine against Chlamydomphila abortus infection)

L60 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:140894 HCAPLUS Full-text

DOCUMENT NUMBER: 146:227428

TITLE: Genetic profiling of dendritic cells exposed to live- or ultraviolet-irradiated Chlamydia muridarum reveals marked differences in CXC chemokine profiles

AUTHOR(S): Zaharik, Michelle L.; Nayar, Tarun; White, Rick; Ma, Caixia; Vallance, Bruce A.; Straka, Nadine; Jiang, Xiaozhou; Rey-Ladino, Jose; Shen, Caixia; Brunham, Robert C.

CORPORATE SOURCE: University of British Columbia Centre for Disease Control, University of British Columbia, Vancouver, BC, Can.

SOURCE: Immunology (2007), 120(2), 160-172
CODEN: IMMUM; ISSN: 0019-2805

PUBLISHER: Blackwell Publishing Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Genetic profiling of dendritic cells exposed to live- or ultraviolet-irradiated Chlamydia muridarum reveals marked differences in CXC chemokine profiles

AB Chlamydia trachomatis is a major cause of sexually transmitted disease worldwide for which an effective vaccine is being actively pursued. Current vaccine efforts will be aided by elucidating the interaction between Chlamydia and dendritic cells (DCs). Protective immunity appears to develop slowly

following natural infection in humans, and early vaccine trials using inactivated *C. trachomatis* resulted in partial, short-lived protection with possible enhanced inflammatory pathol. during re-infection. Thus, immunity following natural infection with live chlamydia may differ fundamentally from immune responses induced by immunization with inactivated chlamydia. The authors explored this conjecture by studying the response of DCs exposed to either viable or inactivated [UV -irradiated] chlamydia elementary bodies (EBs; designated as Live-EB and UV-EB, resp.) using Affymetrix GeneChip microarrays. Thirty-one immunol. characterized genes were differentially expressed by DCs following exposure to Live-EB or UV-EB, including two glutamic acid-leucine-arginine cysteine-X-cysteine (ELR CXC) neutrophil chemoattractant chemokines, Cxcl1 (KC), and Cxcl2 (MIP-2). Up-regulation of these genes by Live-EB as compared to UV-EB was verified by quant. reverse transcription-polymerase chain reaction and increased chemokine secretion was confirmed by ELISA both in vitro and in vivo. Immunofluorescence and fluorescence-activated cell sorter anal. of chlamydia-infected lung tissue confirmed that Live-EB but not UV-EB induced significant DC and neutrophil infiltration during infection. These observations demonstrate that the development of an antichlamydial immune response is dramatically influenced by chlamydial viability. This has implications as to why early inactivated chlamydial vaccines were ineffective and suggests that new vaccine design efforts may benefit from in vitro DC screening for ELR chemokine expression profiles.

IT CXC chemokines

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CXCL1; genetic profiling of dendritic cells exposed to live- or UV-irradiated *Chlamydia muridarum* reveals marked differences in CXC chemokine profiles)

IT CXC chemokines

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CXCL5; genetic profiling of dendritic cells exposed to live- or UV-irradiated *Chlamydia muridarum* reveals marked differences in CXC chemokine profiles)

IT Cell infiltration

Chlamydia muridarum
Dendritic cell
Gene expression profiles, animal
Infection
Neutrophil
UV radiation
Vaccines
(genetic profiling of dendritic cells exposed to live- or UV-irradiated *Chlamydia muridarum* reveals marked differences in CXC chemokine profiles)

IT Interleukin 12

Interleukin 6
Macrophage inflammatory protein 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genetic profiling of dendritic cells exposed to live- or UV-irradiated *Chlamydia muridarum* reveals marked differences in CXC chemokine profiles)

L60 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1188715 HCAPLUS Full-text

DOCUMENT NUMBER: 148:98703

TITLE: Ovine Enzootic Abortion (OEA): a comparison of antibody responses in vaccinated and naturally-infected swiss sheep over a two year period
AUTHOR(S): Gerber, Andrea; Thoma, Ruedi; Vretou, Evangelia; Psarrou, Evgenia; Kaiser, Carmen; Doherr, Marcus G.;

Zimmermann, Dieter R.; Polkinghorne, Adam; Pospischil, Andreas; Borel, Nicole
 CORPORATE SOURCE: Institute of Veterinary Pathology, Vetsuisse Faculty, University of Zurich, Switz.
 SOURCE: BMC Veterinary Research (2007), 3, No pp. given
 CODEN: BVRMA9; ISSN: 1746-6148
 URL: <http://www.biomedcentral.com/content/pdf/1746-6148-3-24.pdf>
 PUBLISHER: BioMed Central Ltd.
 DOCUMENT TYPE: Journal; (online computer file)
 LANGUAGE: English
 REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Background: Prevention and control of ovine enzootic abortion (OEA) can be achieved by application of a live vaccine. In this study, five sheep flocks with different vaccination and infection status were serol. tested using a competitive ELISA (cELISA) specific for *Chlamydophila* (Cp.) *abortus* over a two-year time period. Results: Sheep in Flock A with recent OEA history had high antibody values after vaccination similar to Flock C with natural Cp. *abortus* infections. In contrast, OEA serol. neg. sheep (Flock E) showed individual animal-specific immunoreactions after vaccination. Antibody levels of vaccinated ewes in Flock B ranged from neg. to pos. two and three years after vaccination, resp. Pos. antibody values in the neg. control Flock D (without OEA or vaccination) are probably due to asymptomatic intestinal infections with Cp. *abortus*. Excretion of the ~~attenuated~~ strain of Cp. *abortus* used in the live vaccine through the eye was not observed in vaccinated animals of Flock E. Conclusions: The findings of our study indicate that, using serol., no distinction can be made between vaccinated and naturally infected sheep. As a result, confirmation of a neg. OEA status in vaccinated animals by serol. cannot be determined

ST vaccine *Chlamydophila* antibody ovine enzootic abortion sheep ELISA infection

IT Abortion
 Bacterial infection
 Blood analysis
Chlamydophila abortus
 Enzyme-linked immunosorbent assay
 Ovis aries
 Sheep
 Vaccines
 (comparison of antibody responses in vaccinated and non vaccinated Swiss sheep with ovine enzootic abortion)

IT Antibodies and Immunoglobulins
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (comparison of antibody responses in vaccinated and non vaccinated Swiss sheep with ovine enzootic abortion)

IT Immunization
 (vaccination; comparison of antibody responses in vaccinated and non vaccinated Swiss sheep with ovine enzootic abortion)

L60 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2006:1208467 HCAPLUS Full-text
 DOCUMENT NUMBER: 145:487664
 TITLE: Nanoemulsion vaccines
 INVENTOR(S): Baker, James R.; Bielinska, Anna; Myc, Andrzej
 PATENT ASSIGNEE(S): Regents of the University of Michigan, USA
 SOURCE: U.S. Pat. Appl. Publ., 141pp., Cont.-in-part of U.S. Ser. No. 162,970.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060257426	A1	20061116	US 2006-403316	20060413
US 20030194412	A1	20031016	US 2002-162970	20020605
US 7314624	B2	20080101		
EP 1528937	A2	20050511	EP 2002-807914	20020605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 20080181949	A1	20080731	US 2007-929295	20071030
PRIORITY APPLN. INFO.:				
			US 2001-296048P	P 20010605
			US 2002-162970	A2 20020605
			WO 2002-US17765	W 20020605
			US 2006-403316	A1 20060413

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The authors disclose methods and compns. for the use of nanoemulsions as mucosal adjuvants to induce immunity against environmental pathogens. Accordingly, in some embodiments, the present invention provides nanoemulsion vaccines comprising a nanoemulsion and an inactivated pathogen or protein derived from the pathogen. In one example, a nanoemulsion was formed using a heated oil phase comprising Triton X-100, soybean oil, and tri-Bu phosphate followed by injection of water in a ratio of 1 part water to four parts oil.

IT Antibodies and Immunoglobulins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (IgA; of enhanced immune response to nanoemulsion vaccines)

IT Antibodies and Immunoglobulins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (IgG; of enhanced immune response to nanoemulsion vaccines)

IT Infection

(anthrax; nanoemulsion vaccines to enhance immune response in)

IT Human

(enhanced immune response to nanoemulsion vaccines)

IT Immunity

(mucosal; enhanced immune response to nanoemulsion vaccines)

IT Alphavirus

Animal virus
 Arenavirus
 Bacillus anthracis
 Bacillus cereus
 Bacillus circulans
 Bacillus megaterium
 Brucella
 Burkholderia pseudomallei
 Chlamydophila psittaci
 Clostridium botulinum
 Clostridium perfringens
 Coxiella burnetii
 Cryptosporidium parvum
 Cytomegalovirus
 Ebola virus
 Escherichia coli
 Eubacteria
 Filovirus

Francisella tularensis
 Fungi
 Haemophilus influenzae
 Hantavirus
 Hepatitis A virus
 Hepatitis B virus
 Hepatitis C virus
 Human herpesvirus 1
 Human herpesvirus 2
 Human immunodeficiency virus
 Human papillomavirus
 Influenza A virus
 Junin virus
 Marburg virus
 Neisseria gonorrhoeae
 Nipah virus
 Parvovirus
 Pathogen
 Picornaviridae
 Proteus mirabilis
 Pseudomonas aeruginosa
 Ricinus communis
 Rickettsia prowazeki
 SARS coronavirus
 Salmonella
 Salmonella typhimurium
 Sendai virus
 Shigella dysenteriae
 Sindbis virus
 Staphylococcus aureus
 Streptococcus agalactiae
 Streptococcus pneumoniae
 Streptococcus pyogenes
 Vaccinia virus
 Vibrio cholerae
 West Nile virus
 Yersinia enterocolitica
 Yersinia pestis
 Yersinia pseudotuberculosis
 (nanoemulsion vaccines for enhanced immune response
 to)

- IT Antigens
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (nanoemulsion vaccines for enhanced immune response
 to)
- IT AIDS (disease)
 (nanoemulsion vaccines to enhance immune response
 in)
- IT Biological warfare agents
 (nanoemulsion vaccines to enhance immune response
 to)
- IT Drug delivery systems
 (nanoemulsions; enhanced immune response to
 nanoemulsion vaccines)
- IT Vaccines
 (synthetic; enhanced immune response to
 nanoemulsion vaccines)
- IT Infection
 (variola; nanoemulsion vaccines to enhance immune

response in)

IT Interferons

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(γ; of enhanced immune response to
nanoemulsion vaccines)

L60 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:119422 HCAPLUS Full-text

TITLE: Nod1-Mediated Endothelial Cell Activation by
Chlamydomphila pneumoniae

AUTHOR(S): Opitz, Bastian; Foerster, Stefanie; Hocke, Andreas C.;
Maass, Matthias; Schmeck, Bernd; Hippenstiel, Stefan;
Suttorp, Norbert; Kruell, Matthias

CORPORATE SOURCE: Department of Internal Medicine/Infectious Diseases,
Charite University Medicine Berlin, Berlin, Germany

SOURCE: Circulation Research (2005), 96(3), 319-326

CODEN: CIRUAL; ISSN: 0009-7330

PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 72 THERE ARE 72 CAPLUS RECORDS THAT CITE THIS
RECORD (72 CITINGS)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Nod1-Mediated Endothelial Cell Activation by *Chlamydomphila pneumoniae*

AB Seroepidemiol. and animal studies, as well as demonstration of viable bacteria
in atherosclerotic plaques, have linked *Chlamydomphila pneumoniae* infection to
development of chronic vascular lesions and coronary heart disease.

Inflammation and immune responses are dependent on host recognition of
invading pathogens. The recently identified cytosolic Nod proteins are
candidates for intracellular recognition of bacteria, such as the obligate
intracellular chlamydia. In the present study, mechanisms of endothelial cell
activation by *C. pneumoniae* via Nod proteins were examined. Viable, but not
heat-inactivated, chlamydia activated human endothelial cells, suggesting that
invasion of these cells is necessary for their profound activation.

Endothelial cells express Nod1. Nod1 gene silencing by small interfering RNA
reduced *C. pneumoniae*-induced IL-8 release markedly. Moreover, in HEK293 cells,
overexpressed Nod1 or Nod2 amplified the capacity of *C. pneumoniae* to induce
nuclear factor κB (NF-κB) activation. Interestingly, heat-inactivated

bacteria were still able to induced a NF-κB reporter gene activity via Nod
proteins when transfected intracellularly, but not when provided from the
extracellular side. In contrast, TLR2 sensed extracellular heat-inactivated
chlamydia. In conclusion, we demonstrated that *C. pneumoniae* induced a Nod1-
mediated and Nod2-mediated NF-κB activation in HEK293 cells. In endothelial
cells, Nod1 played a dominant role in triggering a chlamydia-mediated
inflammatory process.

L60 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:1022059 HCAPLUS Full-text

DOCUMENT NUMBER: 143:420715

TITLE: *Chlamydomphila pneumoniae* induces expression of
Toll-like receptor 4 and release of TNF-α and
MIP-2 via an NF-κB pathway in rat type II
pneumocytes

AUTHOR(S): Wissel, Heide; Schulz, Christian; Koehne, Petra;
Richter, Ekkehard; Maass, Matthias; Ruediger, Mario

CORPORATE SOURCE: Clinic for Neonatology, Berlin, D-10098, Germany

SOURCE: Respiratory Research (2005), 6(1), No pp. given

CODEN: RREEBZ; ISSN: 1465-993X

URL: <http://respiratory-research.com/content/pdf/1465-9921-6-51.pdf>

PUBLISHER: BioMed Central Ltd.

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

- II *Chlamydomophila pneumoniae* induces expression of Toll-like receptor 4 and release of TNF- α and MIP-2 via an NF- κ B pathway in rat type II pneumocytes
- AB The role of alveolar type II cells in the regulation of innate and adaptive immunity is unclear. Toll-like receptors (TLRs) have been implicated in host defense. The purpose here was to investigate whether *C. pneumoniae* (1) alters the expression of TLR2 and/or TLR4 in type II cells in a (2) Rho-GTPase- and (3) NF- κ B-dependent pathway, subsequently (4) leading to the production of (4) pro-inflammatory TNF- α and MIP-2. Isolated rat type II pneumocytes were incubated with *C. pneumoniae* after pre-treatment with calcium chelator BAPTA-AM, inhibitors of NF- κ B (parthenolide, SN50) or with a specific inhibitor of the Rho-GTPase (mevastatin). TLR2 and TLR4 mRNA expression was analyzed by PCR. Activation of TLR4, Rac1, RhoA protein and NF- κ B was determined by Western blotting and confocal laser scan microscopy (CLSM) and TNF- α and MIP-2 release by ELISA. Type II cells constitutively expressed TLR4 and TLR2 mRNA. A prominent induction of TLR4 but not TLR2 mRNA was detected after 2 h of incubation with *C. pneumoniae*. The TLR4 protein expression reached a peak at 30 min, began to decrease within 1-2 h and peaked again at 3 h. Incubation of cells with heat-inactivated bacteria (56° for 30 min) reduced the TLR4 expression. Treatment of bacteria with polymyxin B (2 μ g/mL) did not alter TLR4 expression. *C. pneumoniae*-induced NF- κ B activity was blocked by TLR4 blocking antibodies. TLR4 mRNA and protein expression was inhibited in the presence of BAPTA-AM, SN50, or parthenolide. TNF- α and MIP-2 release was increased in type II cells in response to *C. pneumoniae*, whereas BAPTA-AM, SN50, or parthenolide decreased the *C. pneumoniae*-induced TNF- α and MIP-2 release. Mevastatin inhibited *C. pneumoniae*-mediated Rac1, RhoA, and TLR4 expression. The TLR4 protein expression in rat type II cells is likely to be mediated by a heat-sensitive *C. pneumoniae* protein that induces a fast Ca²⁺-mediated NF- κ B activity, necessary for maintenance of TLR4 expression and TNF- α and MIP-2 release through possibly Rac and Rho protein-dependent mechanism. Thus, type II pneumocytes play an important role in the innate pulmonary immune system and in inflammatory response mechanism of the alveolus.
- ST *Chlamydomophila* Toll receptor TLR4 cytokine NFkappaB type II pneumocyte; tumor necrosis factor *Chlamydomophila* receptor TLR4 NFkappaB pneumocyte; MIP2 chemokine *Chlamydomophila* receptor TLR4 NFkappaB type II pneumocyte
- IT *Chlamydomophila pneumoniae*
(*Chlamydomophila pneumoniae* induces expression of Toll-like receptor 4 and release of tumor necrosis factor and MIP-2 via NF- κ B signaling in rat type II pneumocytes)
- IT Macrophage inflammatory protein 2
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(*Chlamydomophila pneumoniae* induces expression of Toll-like receptor 4 and release of tumor necrosis factor and MIP-2 via NF- κ B signaling in rat type II pneumocytes)
- IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(NF- κ B (nuclear factor of κ light chain gene enhancer in B-cells); *Chlamydomophila pneumoniae* induces expression of Toll-like receptor 4 and release of tumor necrosis factor and MIP-2 via

NF- κ B signaling in rat type II pneumocytes)

IT Receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (TLR-4 (Toll-like receptor-4); *Chlamydomonas pneumoniae*
 induces expression of Toll-like receptor 4 and release of tumor
 necrosis factor and MIP-2 via NF- κ B signaling in rat type II
 pneumocytes)

IT Inflammation
 Lung, disease
 (pneumonitis; *Chlamydomonas pneumoniae* induces expression of
 Toll-like receptor 4 and release of tumor necrosis factor and MIP-2 via
 NF- κ B signaling in rat type II pneumocytes)

IT Lung
 (type II cell; *Chlamydomonas pneumoniae* induces expression of
 Toll-like receptor 4 and release of tumor necrosis factor and MIP-2 via
 NF- κ B signaling in rat type II pneumocytes)

IT 7440-70-2, Calcium, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (*Chlamydomonas pneumoniae* induces expression of Toll-like
 receptor 4 and release of tumor necrosis factor and MIP-2 via
 calcium-mediated NF- κ B signaling in rat type II pneumocytes)

L60 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:372844 HCAPLUS Full-text

DOCUMENT NUMBER: 140:368742

TITLE: Use of lipid conjugates in the treatment of disease

INVENTOR(S): Yedgar, Saul; Krinsky, Miron; Beck, Grietje; Yard,
 Benito Antonio; Van Der Woude, Fokko Johannes

PATENT ASSIGNEE(S): Yissum Research Development Company of the Hebrew
 University of Jerusalem, Israel

SOURCE: U.S. Pat. Appl. Publ., 103 pp., Cont.-in-part of U.S.
 Ser. No. 756,765.
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 16

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040087492	A1	20040506	US 2003-627981	20030728
US 7101859	B2	20060905		
US 20020049183	A1	20020425	US 2001-756765	20010110
US 7034006	B2	20060425		
US 20050143288	A1	20050630	US 2004-989606	20041117
US 7811999	B2	20101012		
US 20050245464	A1	20051103	US 2004-989607	20041117
US 7772196	B2	20100810		
US 20060079485	A1	20060413	US 2005-220965	20050908
US 7504384	B2	20090317		
US 20060189568	A1	20060824	US 2005-220964	20050908
US 20060189569	A1	20060824	US 2005-220966	20050908
US 20060189570	A1	20060824	US 2005-220967	20050908
US 20060189571	A1	20060824	US 2005-220968	20050908
US 20060293276	A1	20061228	US 2005-285375	20051123
WO 2007029258	A2	20070315	WO 2006-IL1048	20060907
WO 2007029258	A3	20070614		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
 KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
 MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
 RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

US 20100022473	A1	20100128	US 2009-406130	20090318
PRIORITY APPLN. INFO.:			US 2000-174907P	P 20000110
			US 2001-756765	A2 20010110
			US 2000-174905P	P 20000110
			US 2003-627981	A2 20030728
			US 2004-919523	A2 20040817
			US 2004-952496	A2 20040929
			US 2004-989606	A2 20041117
			US 2004-989607	A2 20041117
			US 2005-220964	A 20050908
			US 2005-220965	A1 20050908
			US 2005-220967	A 20050908

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The invention provides novel methods for treating disease based upon the medicinal use of lipids and phospholipids covalently bound to physiolo. acceptable monomers or polymers. Phosphatidylethanolamine moieties conjugated to physiolo. acceptable monomers and polymers (PE conjugates) manifest an unexpectedly wide range of pharmacol. effects, including stabilizing cell membranes; limiting oxidative damage to cell and blood components; limiting cell proliferation, cell extravasation and (tumor) cell migratory behavior; suppressing immune responses; and attenuating physiolo. reactions to stress, as expressed in elevated chemokine levels. The surprisingly manifold pharmacol. properties of the phospholipid-conjugates allow for the invention, disclosed herein, of novel methods for the treatment of a diverse range of disease states, including obstructive respiratory disease, including asthma; colitis and Crohn's disease; central nervous system insult, including blood brain barrier compromise, ischemic stroke, and multiple sclerosis; contact dermatitis; psoriasis; cardiovascular disease, including ischemic conditions and prophylaxis for invasive vascular procedures; cellular proliferative disorders, including anti-tumor vasculogenesis, invasiveness, and metastases; anti-oxidant therapy; hemolytic syndromes; sepsis; acute respiratory distress syndrome; tissue transplant rejection syndromes; autoimmune disease; viral infection; and hypersensitivity conjunctivitis. The therapeutic methods of the invention include administration of phosphatidylethanolamine bound to CM-cellulose, heparin, hyaluronic acid, polyethylene glycol, and Polygeline (haemaccel). Disclosed herein are also new compds. comprised of phospholipid moieties bound to low mol. weight monomers and dimers, including mono- and disaccharides, carboxylated disaccharides, mono- and dicarboxylic acids, salicylates, bile acids, and fatty acids.

IT Angiogenesis inhibitors
 Anti-AIDS agents
 Anti-inflammatory agents
 Antiasthmatics
 Antibacterial agents
 Antioxidants
 Antitumor agents
 Antiviral agents

Asthma
 Atherosclerosis
 Autoimmune disease
 Cardiovascular agents
 Chlamydophila psittaci
 Cytotoxic agents
 Hemolysis
 Human
 Immunosuppressants
 Ischemia
 Multiple sclerosis
 Nervous system agents
 Psoriasis
 Sepsis
 Transplant and Transplantation
 (lipid conjugates for disease treatment)

L60 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:448929 HCAPLUS Full-text

DOCUMENT NUMBER: 139:259619

TITLE: Relationship between the immune response and protection conferred by new designed inactivated vaccines against ovine enzootic abortion in a mouse model

AUTHOR(S): Caro, Maria R.; Ortega, Nieves; Buendia, Antonio J.; Gallego, Maria C.; del Rio, Laura; Cuello, Francisco; Salinas, Jesus

CORPORATE SOURCE: Facultad de Veterinaria, Departamento de Sanidad Animal, Universidad de Murcia, Murcia, 30100, Spain

SOURCE: Vaccine (2003), 21(23), 3126-3136
CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Relationship between the immune response and protection conferred by new designed inactivated vaccines against ovine enzootic abortion in a mouse model

AB *Chlamydophila abortus* is a gram-neg. obligate intracellular bacterium and the etiol. agent of ovine enzootic abortion (OEA), an economically important disease in many countries. Inactivated vaccines have been reported to induce immunity in ewes and they have been used for many years. However, some outbreaks have been reported in correctly vaccinated flocks, so it is clear that new vaccines are necessary to address adequate protection and to avoid the shedding of the microorganism. This idea lead the authors to design inactivated vaccines, in a previously established mouse model, evaluating different inactivation procedures and new adjuvants. To assess the protection conferred, the results were analyzed on the basis of clin. signs and the isolation of *C. abortus* from spleen. These findings were correlated with the immune response induced by the vaccines, as determined by the production of *C. abortus*-specific IFN- γ and IL-4 from splenocyte cultures and the detection of IgG isotypes in serum. BEI was the best *C. abortus*-inactivation procedure. The inactivated vaccines adjuvanted with QS-21 (QS) or Montanide 773 (M7) induced the best protection both against homologous and heterologous challenge, with an adequate (Th1-like) immune response. Finally, these selected vaccines were evaluated in a pregnant mouse model, in which they were seen to confer good protection and to avoid the *C. abortus* persistence in

uterus after delivery. With these results, this mouse model could be considered as an adequate tool for selecting and optimizing effective vaccines against OEA.

- IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgG2a; immune response to inactivated
Chlamydomphila abortus vaccine against ovine enzootic
abortion)
- IT Immunostimulants
(adjuvants, Ribi; immune response to
inactivated Chlamydomphila abortus vaccine
against ovine enzootic abortion)
- IT T cell (lymphocyte)
(helper cell/inducer, TH1; immune response to
inactivated Chlamydomphila abortus vaccine
against ovine enzootic abortion)
- IT Chlamydomphila abortus
Vaccines
(immune response to inactivated
Chlamydomphila abortus vaccine against ovine enzootic
abortion)
- IT Interleukin 4
Paraffin oils
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immune response to inactivated
Chlamydomphila abortus vaccine against ovine enzootic
abortion)
- IT Abortion
(ovine enzootic; immune response to
inactivated Chlamydomphila abortus vaccine
against ovine enzootic abortion)
- IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(γ; immune response to inactivated
Chlamydomphila abortus vaccine against ovine enzootic
abortion)
- IT 151-56-4, Ethylenimine, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(binary; for inactivation of Chlamydomphila
abortus)
- IT 21645-51-2, Rehydragel, biological studies 66594-14-7, Quil A
141256-04-4, QS-21 158516-73-5, Montanide ISA 206 557103-15-8,
Montanide ISA 773
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immune response to inactivated
Chlamydomphila abortus vaccine against ovine enzootic
abortion)

L60 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:876315 HCAPLUS Full-text

DOCUMENT NUMBER: 139:363550

TITLE: More than just innate immunity: Comparative analysis
of Chlamydomphila pneumoniae and Chlamydia
trachomatis effects on host-cell gene regulation

AUTHOR(S): Hess, Simone; Peters, Jan; Bartling, Gerda;
Rheinheimer, Claudia; Hegde, Priti; Magid-slav,
Michal; Tal-singer, Ruth; Klos, Andreas

CORPORATE SOURCE: Department of Medical Microbiology, Medical School
Hannover, Hannover, D-30623, Germany

SOURCE: Cellular Microbiology (2003), 5(11), 785-795
 CODEN: CEMIF5; ISSN: 1462-5814
 PUBLISHER: Blackwell Publishing Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OS.CITING REF COUNT: 30 THERE ARE 30 CAPLUS RECORDS THAT CITE THIS
 RECORD (30 CITINGS)
 REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI More than just innate immunity: Comparative analysis of *Chlamydomphila*
 pneumoniae and *Chlamydia trachomatis* effects on host-cell gene regulation
 AB *Chlamydomphila* pneumoniae and *Chlamydia trachomatis* cause infections of the
 respiratory or urogenital tract. In addition, both species have been
 associated with atherosclerosis or reactive arthritis resp. For these
 intracellular pathogens the interaction with their host-cells is of particular
 importance. To get insight into this relationship, we conducted a comparative
 anal. of the host-cell gene regulation of human epithelial cells during
 infection with *Chlamydia*. In a screening of HeLa cells by Affymetrix-
 microchips, numerous regulated host-genes were identified. A detailed
 expression profile was obtained for 14 genes by real-time RT-PCR - comparing
C. pneumoniae, *C. trachomatis* and intracellular *S. typhimurium*. The
 transcriptional responses induced by *C. pneumoniae* were similar (but usually
 smaller) compared to *C. trachomatis*, some were absent. UV-inactivated
 bacteria induced no differential gene expression suggesting that
 pathomechanisms other than those associated with innate immunity play here an
 important role. The expression pattern induced by *Salmonella* differed
 substantially. These genus- or group-specific transcriptional response
 patterns elicited by viable intracellular pathogens may considerably
 contribute to the different pathologies encountered in the clinic.
 ST *Chlamydia Chlamydomphila* infection DNA microarray gene expression
 IT Apoptosis
 Atherosclerosis
Chlamydia trachomatis
Chlamydomphila pneumoniae
 DNA microarray technology
 Gene expression profiles, animal
 Human
 (host gene regulation in immune response to
Chlamydomphila pneumoniae and *Chlamydia trachomatis* infections)
 IT Cell adhesion molecules
 Chemokines
 Cytokines
 Gene, animal
 Transcription factors
 RL: ANT (Analyte); ANST (Analytical study)
 (host gene regulation in immune response to
Chlamydomphila pneumoniae and *Chlamydia trachomatis* infections)
 IT Respiratory system, disease
 Urogenital system, disease
 (infection; host gene regulation in immune response
 to *Chlamydomphila pneumoniae* and *Chlamydia trachomatis*
 infections)
 IT Infection
 (urogenital; host gene regulation in immune response
 to *Chlamydomphila pneumoniae* and *Chlamydia trachomatis*
 infections)
 IT 189460-40-0, Connective tissue growth factors
 RL: ANT (Analyte); ANST (Analytical study)
 (host gene regulation in immune response to
Chlamydomphila pneumoniae and *Chlamydia trachomatis* infections)

L60 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2002:615357 HCAPLUS Full-text

DOCUMENT NUMBER: 137:184446

TITLE: ~~Attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases

INVENTOR(S): Kernodle, Douglas S.; Bochan, Markian R.

PATENT ASSIGNEE(S): Vanderbilt University, USA; The United States Government as Represented by the Department of Veteran's Affairs

SOURCE: PCT Int. Appl., 164 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002062298	A2	20020815	WO 2002-US3451	20020207
WO 2002062298	A3	20030220		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2437596	A1	20020815	CA 2002-2437596	20020207
AU 2002240269	A1	20020819	AU 2002-240269	20020207
AU 2002240269	B2	20070621		
EP 1361794	A2	20031119	EP 2002-706163	20020207
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2005504502	T	20050217	JP 2002-562306	20020207
JP 4197614	B2	20081217		
ZA 2003006058	A	20040602	ZA 2003-6058	20030806
IN 2003DN01267	A	20050527	IN 2003-DN1267	20030811
US 20040109875	A1	20040610	US 2004-467644	20040120
IN 2010DN02057	A	20100820	IN 2010-DN2057	20100323
PRIORITY APPLN. INFO.:			US 2001-267328P	P 20010207
			US 2001-322989P	P 20010918
			WO 2002-US3451	W 20020207
			IN 2003-DN1267	A3 20030811

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

TI ~~Attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases

AB Whole-cell vaccines and methods for their use in producing protective ~~immune responses~~ in vertebrate hosts subsequently exposed to pathogenic bacteria. The present invention involves a method of enhancing antigen presentation by intracellular bacteria in a manner that improves vaccine efficacy. After identifying an enzyme that has an anti-apoptotic effect upon host cells infected by an intracellular microbe, the activity of the enzyme is reduced, thereby modifying the microbe so that it increases immunogenicity. Also, the present invention provides a method of incrementally modifying enzyme activity

to produce incrementally ~~attenuated~~ mutants of the microbe from which an effective vaccine candidate can be selected.

ST antiapoptotic enzyme ~~attenuated~~ bacteria vaccine infectious disease

IT Enzymes, biological studies

RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(anti-apoptotic; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)

IT Actinobacillus pleuropneumoniae

Bacillus anthracis

Brucella

Brucella melitensis

Campylobacter

Chlamydia

Chlamydia pneumoniae

Chlamydia trachomatis

Chlamydophila psittaci

Coxiella burnetii

Ehrlichia

Ehrlichia ruminantium

Escherichia coli

Eubacteria

Haemophilus

Haemophilus ducreyi

Haemophilus influenzae

Human

Immunodeficiency

Immunostimulation

Infection

Legionella

Legionella pneumophila

Listeria ivanovii

Listeria monocytogenes

Mammalia

Mannheimia haemolytica

Mutagenesis

Mycobacterium BCG

Mycobacterium africanum

Mycobacterium avium

Mycobacterium avium paratuberculosis

Mycobacterium bovis

Mycobacterium intracellulare

Mycobacterium kansasii

Mycobacterium marinum

Mycobacterium tuberculosis

Mycobacterium ulcerans

Neisseria gonorrhoeae

Neisseria meningitidis

Nocardia

Nocardia asteroides

Pasteurella

Pasteurella multocida

Pseudomonas

Pseudomonas aeruginosa

Respiratory system

Rickettsia

Salmonella

Salmonella typhi

Shigella

Staphylococcus aureus
 Staphylococcus epidermidis
 Streptococcus agalactiae
 Streptococcus pyogenes
 Tuberculosis
 Vaccines
 Vibrio cholerae
 Yersinia
 Yersinia enterocolitica
 Yersinia pestis
 (~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Leader peptides
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Thioredoxins
 RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Antigens
 Antisense oligonucleotides
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Infection
 Pathogen
 (bacterial; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Metabolism
 (basic cell; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Amino acids, biological studies
 Lipids, biological studies
 Nucleic acids
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (biosynthesis enzyme; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Drug delivery systems
 (carriers; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Immunity
 (cell-mediated; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT T cell (lymphocyte)
 (cytotoxic, CD8+; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
 IT Antigen presentation

- (enhancement; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Proteins
RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(glutaredoxin-like; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Scavengers
(iron-scavenging mol.; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Mutagenesis
(site-directed, deletion; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Mutagenesis
(site-directed, insertion; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Mutagenesis
(site-directed, substitution; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Proteins
RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(thioredoxin reductase-like; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT Proteins
RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(thioredoxin-like; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT 9023-70-5, Glutamine synthetase 9054-89-1, Superoxide dismutase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT 9001-05-2, Catalase 9001-48-3, Glutathione reductase 9001-62-1, Lipase 9001-92-7, Protease 9002-13-5, Urease 9013-79-0, Esterase 9013-93-8, Phospholipase 9035-82-9, Dehydrogenase 9037-29-0, Oxygenase 9055-15-6, Oxidoreductase 9074-14-0, Thioredoxin reductase 101637-43-8, Sulfur reductase 110910-59-3, ATP-dependent protease Clp 354575-51-2, Protein disulfide oxidoreductase
RL: BSU (Biological study, unclassified); REM (Removal or disposal); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT 120-73-0D, 1H-Purine, derivs.
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(purines, biosynthesis enzyme; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)
- IT 448984-30-3 448984-31-4 448984-32-5 448984-33-6
RL: PRP (Properties)

(unclaimed nucleotide sequence; ~~attenuated~~ bacteria having reduced anti-apoptotic enzyme activity to enhance immunogenicity and for use as vaccines against infectious diseases)

L60 ANSWER 23 OF 25 MEDLINE on STN DUPLICATE 3
 ACCESSION NUMBER: 2006104351 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 16490708
 TITLE: Vaccination against chlamydial infections of man and animals.
 AUTHOR: Longbottom D; Livingstone M
 CORPORATE SOURCE: Moredun Research Institute, Pentlands Science Park, International Research Center, Bush Loan, Penicuik, Midlothian, Edinburgh EH26 0PZ, UK..
 david.longbottom@mri.sari.ac.uk
 SOURCE: Veterinary journal (London, England : 1997), (2006 Mar) Vol. 171, No. 2, pp. 263-75. Electronic Publication: 2004-11-11. Ref: 148
 Journal code: 9706281. ISSN: 1090-0233. L-ISSN: 1090-0233.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 (RESEARCH SUPPORT, NON-U.S. GOV'T)
 General Review; (REVIEW)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200604
 ENTRY DATE: Entered STN: 22 Feb 2006
 Last Updated on STN: 7 Apr 2006
 Entered Medline: 6 Apr 2006
 REFERENCE COUNT: 148 There are 148 cited references for this document.

AB Vaccination is the best approach for controlling the spread of chlamydial infections, in animal and human populations. This review summarises the progress that has been made towards the development of effective vaccines over the last 50 years, and discusses current vaccine strategies. The ultimate goal of vaccine research is to develop efficacious vaccines that induce sterile, long-lasting, heterotypic protective ~~immune responses~~. To date, the greatest success has been in developing whole organism based killed or live ~~attenuated~~ vaccines against the animal pathogens *Chlamydoiphila abortus* and *Chlamydoiphila felis*. However, similar approaches have proved unsuccessful in combating human chlamydial infections. More recently, emphasis has been placed on the development of subunit or multicomponent vaccines, as cheaper, safer and more stable alternatives. Central to this is a need to identify candidate vaccine antigens, which is being aided by the sequencing of representative genomes of all of the chlamydial species. In addition, it is necessary to identify suitable adjuvants and develop methods for antigen delivery that are capable of eliciting mucosal and systemic cellular and humoral ~~immune responses~~. DNA vaccination in particular holds much promise, particularly in terms of safety and stability, although it has so far been less effective in humans and large animals than in mice. Thus, much research still needs to be done to improve the delivery of plasmid DNA, as well as the expression and presentation of antigens to ensure that effective ~~immune responses~~ are induced.

L60 ANSWER 24 OF 25 MEDLINE on STN DUPLICATE 5
 ACCESSION NUMBER: 2003482615 MEDLINE Full-text
 DOCUMENT NUMBER: PubMed ID: 14560444
 TITLE: [Humoral ~~immune response~~ in breeding sows after vaccination with a herd-specific *Chlamydoiphila abortus* vaccine].
 Humorale Immunantwort von Zuchtsauen nach Impfung mit einer

AUTHOR: stallspezifischen Chlamydomphila abortus-Vakzine.
 Knitz J C; Hoelzle L E; Affolter P; Hamburger A; Zimmermann
 K; Heinritzi K; Wittenbrink M M
 CORPORATE SOURCE: Institut fur Veterinarbakteriologie, Universitat Zurich,
 Schweiz.
 SOURCE: DTW. Deutsche tierarztliche Wochenschrift, (2003 Sep) Vol.
 110, No. 9, pp. 369-74.
 Journal code: 7706565. ISSN: 0341-6593. L-ISSN: 0341-6593.
 PUB. COUNTRY: Germany: Germany, Federal Republic of
 DOCUMENT TYPE: (ENGLISH ABSTRACT)
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: German
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200401
 ENTRY DATE: Entered STN: 17 Oct 2003
 Last Updated on STN: 16 Jan 2004
 Entered Medline: 15 Jan 2004

- TI [Humoral immune response in breeding sows after vaccination with a
 herd-specific Chlamydomphila abortus vaccine].
 Humorale Immunantwort von Zuchtsauen nach Impfung mit einer
 stallspezifischen Chlamydomphila abortus-Vakzine.
- AB A chlamydial vaccine efficacy trial with assessment of the clinical
 acceptability and serum antibody responses was performed in breeding sows. A
 BGM cell culture derived vaccine containing 10(8)/ml formalin-inactivated
 purified elementary bodies (Eb.) in sterile 0.15 M saline was prepared from
 Chlamydomphila (Ch.) abortus strain OCHL03/99 which has been isolated in the
 herd from a sample of vaginal discharge. Vaccination was performed as a
 randomised trial with parallel treatment of a vaccinated group (25 sows) and
 non-vaccinated control group (20 sows). Sows received two 2.0-ml doses of
 vaccine intramuscularly at a three week interval. Control sows were dosed
 with sterile 0.15 M saline, accordingly. Serological response to vaccination
 was measured by ELISA with a total of 204 blood serum samples (114 from the
 vaccine group; 90 from the control group) using crude chlamydial LPS as the
 antigen. Compared to the control group, vaccinated sows showed a marked
 primary and secondary IgG serum antibody response following the two
 vaccinations. Antibody levels peaked between week 7 and 14 after priming
 vaccination, declined incrementally until week 27 but remained significantly
 higher than the corresponding sham-immune control levels and the
 prevaccination values of the vaccine group ($p < 0.05$). Western blot analysis
 of solubilized whole Eb. of Ch. abortus, Ch. pecorum, and Chlamydia (C.) suis
 with pre- and postvaccination sera confirmed that vaccination induced an
 antibody response preferentially against a range of 13 chlamydial antigens
 including the 40 kDa MOMP of Ch. abortus. Clinical side effects consisting of
 a transient mild local inflammatory reaction at the site of injection were
 observed in approx. 30% of vaccinated sows. These results provide the basis
 for further clinical evaluation of the Ch. abortus vaccine to protect sows
 from chlamydia-induced reproductive disorders.

L60 ANSWER 25 OF 25 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN
 ACCESSION NUMBER: 2010-G04725 [201038] WPIX
 TITLE: New isolated porcine circovirus strain type 2 useful for
 treating porcine circovirus associated diseases e.g.
 postweaning multisystemic wasting syndrome, porcine
 dermatitis and nephropathy syndrome, porcine respiratory
 disease complex
 DERWENT CLASS: B04; C06; D16
 INVENTOR: CSAGOLA A; MISAK F; PENZES Z; TUBOLY T
 PATENT ASSIGNEE: (CEVA-N) CEVA SANTE ANIMALE
 COUNTRY COUNT: 124

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2010061000	A1	20100603	(201038)*	EN	40[7]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2010061000	A1	WO 2009-EP66007	20091127

PRIORITY APPLN. INFO: US 2008-118505P 20081128

DETD DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) new isolated porcine circovirus strain type 2 comprising a nucleotide sequence containing 1778 base pairs as given in the specification (SEQ ID NO: 1), or a nucleotide sequence having a homology of at least 99% to nucleotide sequence as given in (SEQ ID NO: 1), a nucleotide sequence which is capable of hybridizing to nucleotide sequence as given in (SEQ ID NO: 1), or to a sequence corresponding to it within the degeneration of genetic code under conditions of high stringency;

(2) new porcine circovirus strain type 2 having a large intergenic region sequence comprising a nucleotide sequence containing 53 base pairs as given in the specification (SEQ ID NO: 2), a nucleotide sequence having a homology of at least 80%, 85%, 90%, 92%, 95%, 97%, or 99% to nucleotide sequence as given in (SEQ ID NO: 2), a nucleotide sequence which is capable of hybridizing to nucleotide sequence as given in (SEQ ID NO: 2), or to a sequence corresponding to it within the degeneration of genetic code under conditions of high stringency;

(3) new mutated porcine circovirus type 2 subtype B1 comprising 11 base pair repeat sequence duplication from nucleotides at positions 41-52 of genome of the porcine circovirus type 2 subtype B1, where the repeat sequence comprises a nucleotide sequence cggcagcacct (SEQ ID NO: 3), a nucleotide sequence having a homology of at least 70%, 75%, 80%, 85%, 90%, 92%, 95%, 97%, or 99% to nucleotide sequence as given in (SEQ ID NO: 3), a nucleotide sequence which is capable of hybridizing to the nucleotide sequence as given in (SEQ ID NO: 3), or to a sequence corresponding it to within the degeneration of genetic code under conditions of high stringency;

(4) a host cell for production of circovirus strain;

(5) producing (P1) a porcine circovirus type 2 virus involving seeding host cells with a seed of culture of circovirus, growing cells under conditions in a manner allowing production of virus, and harvesting porcine circovirus type 2 from the cells;

(6) propagating (P2) a porcine circovirus type 2 virus involving inserting into a large intergenic region of the genome of circovirus a nucleotide sequence as given in (SEQ ID NO: 3), growing a cell line under conditions so as to obtain a titre of up to 10⁶ TCID₅₀ viral particles per ml;

(7) propagating porcine circovirus 1 or 2, subtype A or B involving seeding host cells, growing cells under conditions in a manner allowing production of circoviruses and harvesting porcine circoviruses from the cells;

(8) new nucleic acid molecule comprising a nucleotide sequence having a homology of at least 99% to nucleotide sequence as given in (SEQ ID NO: 1), or a homology of at least 80% to nucleotide sequence as given in (SEQ ID NO: 2), a nucleotide sequence which is capable of hybridizing to the nucleotide sequence as given in (SEQ ID NOs: 1 or 2), or to a sequence corresponding it to within the degeneration of genetic code under

conditions of high stringency;

(9) new nucleic acid molecule comprising genome of a porcine circovirus type 2 subtype B comprising 11 base pair repeat sequence duplication from nucleotide at positions 41 of the nucleotide sequence of the genome of porcine circovirus type 2 subtype B1, where the repeat sequence comprises a nucleotide sequence as given in (SEQ ID NO: 3), a nucleotide sequence having a homology of at least 70%, 75%, 80%, 85%, 90%, 92%, 95%, 97%, or 99% to the nucleotide sequence as given in (SEQ ID NO: 3), a nucleotide sequence which is capable of hybridizing to the nucleotide sequence as given in (SEQ ID NO: 3), or to a sequence corresponding to it within the degeneration of genetic code under conditions of high stringency;

(10) new nucleic acid molecule (A1) for expression of at least one circovirus polypeptide comprising a nucleotide sequence as given in (SEQ ID NO: 1), (SEQ ID NO: 2), or their portion encoding the polypeptide;

(11) new nucleic acid molecule (A2) for expression of a mutated ORF1 comprising a nucleotide sequence as given in (SEQ ID NO: 2);

(12) a protein encoded by the nucleic acid molecule;

(13) a vector, virus, plasmid or host cell comprising the nucleic acid molecule;

(14) a circovirus vaccine composition for eliciting immunological response against porcine circovirus comprising the porcine circovirus type 2, their subunit, the recombinant protein, recombinant vector, virus, or plasmid, or the propagating cell line of host cell, and a veterinary acceptable vehicle or excipient;

(15) a container comprising the composition;

(16) a kit comprising the container and instruction manual including information for administration of composition into pigs for treating and/or preventing porcine circovirus associated diseases;

(17) diagnostic kit or reagent comprising DNA probes or primers corresponding to a nucleotide sequence or their fragment as given in (SEQ ID NOs: 1-3), a nucleotide sequence having a homology of at least 99% to nucleotide sequence as given in (SEQ ID NO: 1), a nucleotide sequence having a homology of at least 80% to nucleotide sequence as given in (SEQ ID NOs: 2 or 3), or a nucleotide sequence which is capable of hybridizing to the nucleotide sequence as given in (SEQ ID NOs: 1-3);

(18) a diagnostic kit or reagent comprising polyclonal or monoclonal antibodies antibody which is capable of binding to porcine circovirus or their sub-units; and

(19) diagnosing presence of circovirus in pigs involving collecting a tissue or fluid sample, contacting sample with diagnosing reagent, and detecting presence of porcine circoviruses in the sample, by hybridization, Polymerase chain reaction (PCR), immunofluorescence, Western blotting, enzyme linked immuno-assays (ELISA) or immunochromatography.

USE

USE - For preparation of composition for treating porcine circovirus type 2 associated diseases selected from postweaning multisystemic wasting syndrome, porcine dermatitis and nephropathy syndrome, porcine respiratory disease complex, reproductive disorders, granulomatous enteritis, exsudative epidermitis, necrotizing lymphadenitis, and congenital tremors; for inducing host immune response against porcine circovirus type 2 (claimed).

TECH

BIOTECHNOLOGY - Preferred Composition: The porcine circovirus type 2B composition obtained by the method (P1) or (P2) comprises up to 106 TCID50 viral particles per ml, or 105 to 108 TCID50 viral particles per ml. The circovirus vaccine composition is formulated from the composition of porcine circovirus type 2B. The circovirus vaccine composition further comprises an adjuvant, such as a light paraffin oil, carbomer, aluminum hydroxide, saponin, avridine (N,N-dioctadecyl-N',N'-bis(2-hydroxyethyl)-

propanediamine), N-(1-(2,3-ditetradecyloxy)propyl)-N,N-dimethyl-N-hydroxyethylammonium bromide (DMRIE) or dodecyl acrylate (DDA), a carrier, and/or a cytokine; an additional immunogenic active component effective against another disease-causing organism in swine; PCV2 subtype A virus; and at least one immunogen from at least one additional pig pathogen selected from 81 pathogens as given in the specification e.g. adenovirus; alphavirus such as eastern equine encephalomyelitis viruses; Balantidium coli; Brachyspira spp., preferably Brachyspira hyodysenteriae, Brachyspira pilosicoli, Brachyspira innocens; classical swine fever virus, african swine fever virus; Chlamydia sp.; Clostridium spp.; Digestive and respiratory Coronavirus; Eimeria spp; Escherichia coli; Japanese Encephalitis virus; Leptospira spp.; Mycobacterium spp. preferably, Mycobacterium avium, Mycobacterium intracellulare and Mycobacterium bovis; Parvovirus; Porcine cytomegalovirus; or Porcine parovirus. Preferred Components: The porcine circovirus strain is inactivated. The host cell is derived from swine testicle cells. The host cell is deposited at the CNCM and having under accession number CNCM 1-4093 or CNCM 1-4092. The nucleic acid (A1) or (A2) is functionally linked to a promoter sequence, such as a homologous or a heterologous promoter, and eventually a cis-acting transcription regulatory sequence.

=> d his ful

(FILE 'HOME' ENTERED AT 17:10:58 ON 13 DEC 2010)

FILE 'CAPLUS' ENTERED AT 17:12:45 ON 13 DEC 2010

E US2006-563199/APPS

L1 2 SEA SPE=ON ABB=ON PLU=ON (US2006-563199/AP OR US2006-563199/PRN)

D SCA

L2 1 SEA SPE=ON ABB=ON PLU=ON L1 AND VACCIN?
SEL RN

FILE 'REGISTRY' ENTERED AT 17:14:06 ON 13 DEC 2010

L3 10 SEA SPE=ON ABB=ON PLU=ON (827073-23-4/BI OR 827073-24-5/BI
OR 827073-25-6/BI OR 827073-26-7/BI OR 827073-27-8/BI OR
827073-28-9/BI OR 827073-29-0/BI OR 827073-30-3/BI OR 827073-86
-9/BI OR 827073-87-0/BI)

FILE 'CAPLUS' ENTERED AT 17:14:14 ON 13 DEC 2010

L4 1 SEA SPE=ON ABB=ON PLU=ON L1 AND L3
D IALL HITSTR

FILE 'HCAPLUS' ENTERED AT 17:22:30 ON 13 DEC 2010

E MYCOPLASMA CYNOS/CT

E E3+ALL

L5 10 SEA SPE=ON ABB=ON PLU=ON MYCOPLASMA CYNOS+PFT,NT/CT OR (M
OR M. OR MYCOPLAS?) (2A)CYNOS

L6 3 SEA SPE=ON ABB=ON PLU=ON L5 AND (INACTIV? OR ATTENUAT? OR
?VACCIN?)

D SCA

L7 10 SEA SPE=ON ABB=ON PLU=ON L5 OR L6

E STREPTOCOCCUS EQUI ZOOEPIDEMICUS/CT

E E3+ALL

L8 372 SEA SPE=ON ABB=ON PLU=ON STREPTOCOCCUS EQUI ZOOEPIDEMICUS+PF
T,NT/CT

L9 468 SEA SPE=ON ABB=ON PLU=ON L8 OR STREP?(3A)ZOOEPID?

E CHLAMYDOPHILA/CT

E E3+ALL


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L10      863 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDOPHILA+PFT,NT/CT
          E CHLAMYDIA+ALL/CT
L11      6964 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA+PFT,NT/CT
L12     19864 SEA SPE=ON  ABB=ON  PLU=ON  L10 OR L11 OR CHLAMYD?
L13        3 SEA SPE=ON  ABB=ON  PLU=ON  (L7 OR CYNOS) AND (L12 OR L9)
          D SCA
L14      924 SEA SPE=ON  ABB=ON  PLU=ON  L12 AND ?VACCIN? AND ?IMMUN?
L15     126 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND (INACTIV? OR ATTENUAT?)
L16      24 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND (L7 OR ?CYNOS? OR MYCOPLAS?
          )
L17      24 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND (L7 OR CYNOS OR MYCOPLAS?)

          D KWIC
L18        1 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND (L7 OR ?CYNOS?)
          D SCA
L19        4 SEA SPE=ON  ABB=ON  PLU=ON  L13 OR L18 OR L6
          E CHLAMYDIA MURIDARUM+ALL/CT
L20     221 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA MURIDARUM+PFT,NT/CT
L21      50 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA PECORUM+PFT,NT/CT
          E CHLAMYDIA PECORUM+ALL/CT
L22      50 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA PECORUM+PFT,NT/CT
L23      55 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA SUIS+PFT,NT/CT
L24     3870 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA TRACHOMATIS+PFT,NT/CT
L25     1930 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA PNEUMONIAE+PFT,NT/CT
L26     5936 SEA SPE=ON  ABB=ON  PLU=ON  (L22 OR L23 OR L24 OR L25) OR
          (CHLAMYP? AND (PECORUM? OR SUIS OR TRACHOMATIS OR PNEUNONIAE))
L27     6678 SEA SPE=ON  ABB=ON  PLU=ON  (L22 OR L23 OR L24 OR L25) OR
          (CHLAMYP? AND (PECORUM? OR SUIS OR TRACHOMATIS OR PNEUMONIAE))
L28     6678 SEA SPE=ON  ABB=ON  PLU=ON  L27 OR L26
L29      273 SEA SPE=ON  ABB=ON  PLU=ON  L28 AND (ATTENUAT? OR INACTIV?)
L30     139 SEA SPE=ON  ABB=ON  PLU=ON  L29 AND ?IMMUN?
L31      58 SEA SPE=ON  ABB=ON  PLU=ON  L29 AND ?IMMUN?(S)?RESPON?
          D KWIC
L32      51 SEA SPE=ON  ABB=ON  PLU=ON  L29 AND ?IMMUN?(3A)?RESPON?
L33     133 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDOPHILA ABORTUS+PFT,NT/CT
L34      68 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDOPHILA FELIS+PFT,NT/CT
L35     221 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA MURIDARUM+PFT,NT/CT
          E CHLAMYDOPHILA PECORUM+ALL/CT
L36      42 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDOPHILA PECORUM+PFT,NT/CT
L37      50 SEA SPE=ON  ABB=ON  PLU=ON  CHLAMYDIA PECORUM+PFT,NT/CT
L38      92 SEA SPE=ON  ABB=ON  PLU=ON  L36 OR L37
L39     1201 SEA SPE=ON  ABB=ON  PLU=ON  (L33 OR L34 OR L35 OR L36 OR L37)
          OR CHLAMYP?(3A) (ABORTUS OR FELIS OR MURIDARUM OR PECORUM) OR
          L10 OR CHLAMYDOPHILA
L40      18 SEA SPE=ON  ABB=ON  PLU=ON  L39 AND (ATTENUAT? OR INACTIV?)
          AND IMMUNE RESPON?
L41      82 SEA SPE=ON  ABB=ON  PLU=ON  L39 AND (ATTENUAT? OR INACTIV?)
L42      55 SEA SPE=ON  ABB=ON  PLU=ON  L41 AND ?IMMUN?
L43      22 SEA SPE=ON  ABB=ON  PLU=ON  L41 AND ?IMMUN?(S)?RESPON?

FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:42:19 ON 13 DEC 2010
L44     53245 SEA SPE=ON  ABB=ON  PLU=ON  ?CHLAMYP?(S) (PECORUM OR SUIS OR
          TRACHOMATIS OR PNEUMONIA?)
L45      928 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND (ATTENUAT? OR INACTIV?)
L46     557 SEA SPE=ON  ABB=ON  PLU=ON  L45 AND ?IMMUN?
L47     238 SEA SPE=ON  ABB=ON  PLU=ON  L45 AND ?IMMUN?(S) ?RESPON?
L48      18 SEA SPE=ON  ABB=ON  PLU=ON  ?CHLAMYP?(2A) (PECORUM OR SUIS OR
          TRACHOMATIS OR PNEUMONIA?) (S) (ATTENUA? OR INACTIV?) (S)
          ?IMMUN?(S) RESPON?
L49      65 SEA SPE=ON  ABB=ON  PLU=ON  ?CHLAMYP?(2A) (PECORUM OR SUIS OR

```

TRACHOMATIS OR PNEUMONIA?) (S) (ATTENUA? OR INACTIV?) AND
 ?IMMUN?(S) RESPON?
 D TRI

L50 12 SEA SPE=ON ABB=ON PLU=ON (CHLAMYDOPHIL? OR ?CHLAMYD?(2A) (ABO
 RTUS OR FELIS OR MURIDARUM OR PECORUM)) (S) (ATTENUA? OR
 INACTIV?) AND ?IMMUN?(S) RESPON?

FILE 'MEDLINE' ENTERED AT 17:47:03 ON 13 DEC 2010

E CHLAMYDIA MURDARUM/CT
 E CHLAMYDIA MURIDARUM/CT
 E E3+ALL
 E CHLAMYDIA PECORUM+ALL/CT
 E E4+ALL
 E E2+ALL
 E CHLAMYDOPHIL/CT
 E CHLAMYDOPHILA ABORTUS/CT

L51 0 SEA SPE=ON ABB=ON PLU=ON CHALMYDOPHILA ABORTUS
 L52 151 SEA SPE=ON ABB=ON PLU=ON CHLAMYDOPHILA ABORTUS
 D TRI
 D
 D 50

FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:50:39 ON 13 DEC 2010

L53 75 SEA SPE=ON ABB=ON PLU=ON L49 OR L50
 L54 1 SEA SPE=ON ABB=ON PLU=ON L53 AND CYNOS
 D KWIC
 L55 1637 SEA SPE=ON ABB=ON PLU=ON ZOOEPID?
 L56 1 SEA SPE=ON ABB=ON PLU=ON L55 AND CYNOS
 L57 1 SEA SPE=ON ABB=ON PLU=ON L54 OR L56

FILE 'HCAPLUS' ENTERED AT 17:52:14 ON 13 DEC 2010

D QUE L19

FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:52:26 ON 13 DEC 2010

D QUE L57

FILE 'HCAPLUS, WPIX' ENTERED AT 17:52:31 ON 13 DEC 2010

L58 4 DUP REM L19 L57 (1 DUPLICATE REMOVED)
 ANSWERS '1-4' FROM FILE HCAPLUS
 D L58 IBIB ABS HIT TOT

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 17:53:02 ON 13 DEC 2010

D QUE L19

FILE 'HCAPLUS' ENTERED AT 17:53:18 ON 13 DEC 2010

D QUE L19

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 17:53:23 ON 13 DEC 2010

D QUE L49

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:53:29 ON 13
 DEC 2010

L59 41 DUP REM L19 L49 (28 DUPLICATES REMOVED)
 ANSWERS '1-4' FROM FILE HCAPLUS
 ANSWERS '5-17' FROM FILE MEDLINE
 ANSWER '18' FROM FILE BIOSIS
 ANSWERS '19-41' FROM FILE WPIX
 D L59 IBIB HIT TOT

FILE 'HCAPLUS' ENTERED AT 17:54:14 ON 13 DEC 2010

D QUE L43

FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:54:27 ON 13 DEC 2010
D QUE L50

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 17:54:33 ON 13
DEC 2010

L60 25 DUP REM L43 L50 (9 DUPLICATES REMOVED)
 ANSWERS '1-22' FROM FILE HCAPLUS
 ANSWERS '23-24' FROM FILE MEDLINE
 ANSWER '25' FROM FILE WPIX
 D L60 IBIB HIT TOT

FILE HOME

FILE CAPLUS

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FILE COVERS 1907 - 13 Dec 2010 VOL 153 ISS 25
FILE LAST UPDATED: 12 Dec 2010 (20101212/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the fourth quarter of 2010.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 DEC 2010 HIGHEST RN 1256335-36-0
DICTIONARY FILE UPDATES: 12 DEC 2010 HIGHEST RN 1256335-36-0

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2010.

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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

FILE HCAPLUS

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FILE MEDLINE

FILE LAST UPDATED: 9 Dec 2010 (20101209/UP). FILE COVERS 1946 TO DATE.

MEDLINE and LMEDLINE have been updated with the 2010 Medical Subject Headings (MeSH) vocabulary and tree numbers from the U.S. National Library of Medicine (NLM). Additional information is available at

http://www.nlm.nih.gov/pubs/techbull/nd09/nd09_medline_data_changes_2010.

The Medline file has been reloaded effective January 24, 2010. See HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

See HELP RANGE before carrying out any RANGE search.

FILE EMBASE

FILE COVERAGE: EMBASE-originated material 1947 to 13 Dec 2010 (20101213/E)
Unique MEDLINE content 1948 to present

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

For further assistance, please contact your local helpdesk.

FILE BIOSIS
FILE COVERS 1926 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 8 December 2010 (20101208/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE WPIX

FILE LAST UPDATED: 8 DEC 2010 <20101208/UP>
MOST RECENT UPDATE: 201079 <201079/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
>>> Now containing more than 1.6 million chemical structures in DCR <<<

>>> IPC, ECLA, US National Classifications and Japanese F-Terms
and FI-Terms have been updated with reclassifications to
end of July 2010.

No update date (UP) has been created for the reclassified
documents, but they can be identified by
specific update codes (see HELP CLA for details) <<<

>>> FOR THE LATEST DERWENT WORLD PATENTS INDEX (DWPI)
STN USER DOCUMENTATION, PLEASE VISIT:
http://www.stn-international.com/stn_dwpi.html <<<

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

>>> For changes in DWPI see HELP CHANGE - last updated April 6, 2010 <<<